ATTACHMENT 3

STATEMENT OF WORK

SPAWAR GLOBAL C4ISR
INSTALLATIONS CONTRACT
Revision C

Version Date:
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1.0 INTRODUCTION

The Space and Naval Warfare Systems Command (SPAWAR) Claimancy mission is to provide the warfighter with knowledge superiority by developing, delivering, and maintaining effective, capable and integrated command, control, communications, computer, intelligence, surveillance and reconnaissance (C4ISR) systems. For the purposes of this SOW, the term "C4ISR" includes inertial navigation systems and enterprise information systems (EIS).

2.0 SCOPE OF CONTRACT

The scope of this contract includes all afloat (includes ship and submarine) and shore-based C4ISR, and supporting systems, current and future – excluding the Navy Marine Corps Intranet (NMCI). The contractor will be required to perform the services described in this SOW for all C4ISR systems under the cognizance of the SPAWAR community. The C4ISR installations will be performed on shore facilities, surface ships, submarines, special purpose craft and other vehicles.

2.1 Type of Work

This SOW defines the requirements for providing program management, engineering design, industrial work, operational verification and other installation support services necessary to accomplish the SPAWAR C4ISR maintenance, modernization, and new system installation processes. The contractor shall, in response to task orders issued under this contract, provide services that potentially span the entire spectrum of requirements associated with delivery of fully operational and sustainable C4ISR systems to the warfighter. The majority of the work required under this contract will generally fall within the following areas, which are broken down in Section 4.0 of this SOW:

Table 1 – Where Requirements are Addressed for Different Types of Work

Ref. SOW Para	Tasks/Subtasks
4.1	Program and Project Management
4.2	Pre-Installation Support
4.3	Installation Support
4.4	Installation Testing and Logistic Support
4.5	Technical Assistance
4.6	Special Fabrication Tasks
4.7	Excess Material/Equipment Disposition Support
4.8	Quality
4.9	Safety
4.10	Clean-up
4.11	Data Security
4.12	Task Order (TO) Completion

2.2 Required Expertise

In response to task orders under this contract, the contractor must be able to provide sufficient technical expertise, services and materials as necessary to effectively and efficiently install, align, verify operation, troubleshoot and/or provide end user training on any C4ISR systems. It is not envisioned that any single company can possess such a broad range of expertise organically. However, for tasks requiring specialized (e.g., operational, troubleshooting, or training) expertise on any C4ISR system, the contractor shall be able to show that they either possess the required expertise in-house or have arranged to obtain it in a timely and cost-effective manner. This can be done by using sub-contracted resources via pre-arranged working agreements. Attachment 2 is provided to show the broad range of C4ISR systems SPAWAR has supported. It is a representative list, not an all-inclusive one, and the Government makes no stipulation as to its completeness. Most of the systems listed in Attachment 2 will not require operational, troubleshooting, or training support under the contract, and some systems that will require support are not listed. However, it is expected that all of the systems that will require support will be identical or similar in function to one or more of the listed systems.

2.3 Web Tools

This contract will maximize the use of web-enabled tools for management. Status reporting, financial reporting, task orders, and task order modifications will be accomplished via posting to the SPAWAR Installation Management Office (IMO) web-enabled databases. User accounts and detailed posting requirements will be provided by the Government upon award of the basic contract. To the maximum extent practical, all deliverables under this contract shall be delivered in formats compatible with applications included in the current NMCI Core Build Contents (formerly Gold Disk contents).

2.4 Locations

The contractor will be required to provide support worldwide, including potentially hostile regions. In addition, each contractor will need to be able to provide coverage for all key fleet concentration areas within an IMO region. The key fleet concentration areas that need to be covered for the LANT IMO region are Norfolk, VA; Charleston, SC; Groton, CT; and Mayport, Florida. The key fleet concentration areas for the PAC IMO region are San Diego, CA; Pearl Harbor, HI; Guam; Yokosuka and Sasebo, Japan; and the Puget Sound area. The contractor will be required to have permanent contractor furnished office, warehouse, and fabrication facilities within a 30-mile radius of at least one of the following:

a. Space and Naval Warfare Systems Center Atlantic (SSC LANT) facilities in Charleston
b. Space and Naval Warfare Systems Center Atlantic (SSC LANT) facilities in Norfolk.
c. Space and Naval Warfare Systems Center Pacific (SSC PAC) facilities in San Diego

2.5 Security Classification

The scope of this contract and any task orders issued shall be limited to General Service (GENSER) Top Secret. However, the attached DD Form 254 includes access to Sensitive Compartmented Information (SCI) that is limited to unescorted access to Government SCI Facilities (SCIFs) only. Any tasks requiring substantial access to SCI will be processed via a separate contract. See Section 7 of this SOW for personnel security requirements and Section 8 of this SOW for operational security requirements.

2.6 Sole Government Contracting Authority

The contractor is warned that only the contracting officer specified on the contract has the authority to obligate the Government and make changes to the contract and all associated task orders. No other Government personnel have this authority. Throughout the contract, various Government personnel will be referenced. The technical representative assisting the Contracting Officer (KO) in the administration of the whole contract is the Contracting Officer's Representative (or COR) who has no contractual authority to obligate the Government. Due to the size of the contract, the multiple task orders, and the distances between worksites, additional Government personnel may be appointed per task order to assist in administering the contract.

3.0 APPLICABLE DOCUMENTS

3.1 General Application Rules and Principles

3.1.1 Effective Issues (Versions or Revisions of Documents)

Unless otherwise specified, the version of a referenced document that is in effect (including the latest revisions, changes and amendments) when the individual task order is issued shall be used when applicable. For solicitation bidding purposes, the document that is in effect on the request for proposal date shall be used. The exceptions to these rules are:

a. The contractor may utilize documents that have been superseded for no longer than six months when the most recent version is not available to the contractor on the date of the task order.
b. The contractor may utilize versions of documents that are published after the task order is issued if no additional costs are involved.

3.1.2 Conflicts

When two mandatory requirements documents (listed in Tables 1, 3, and 5) are applicable and provide different but compatible requirements, the contractor shall follow the more stringent requirement so that the requirements of both documents are met. If two mandatory requirements documents have requirements that are in direct conflict so that it is impossible to meet both requirements, the contractor shall notify the contracting officer as soon as possible, and the contracting officer will determine which guidance shall be followed based upon what is in the best interest of the Government. When two mandatory guidance documents (listed in Tables 2 and 4) provide different guidance, the contractor shall notify the contracting officer and determine which guidance should be followed based upon what is in the best interest of the Government.

3.1.3 Precedence

The requirements of this SOW take precedence over the requirements of the referenced documents except that nothing in this SOW shall be interpreted to allow any violation of an OSHA requirement or regulation, the National Electrical Code, or other Safety Standards referenced in this Statement of Work.

3.1.4 Sources of Documents

Web based and SPAWAR document sources are provided in Tables 1 through 5 in the "Source" column.
NAVSEA Standard Items can be found at
http://www.sermc.surfor.navy.mil/SSRAC1/standard.htm.

Any additional references invoked under individual task orders will be provided by the task order originator.

3.1.5 Accessibility Standards

Unless an exception in the regulation applies, Electronic and Information Technology (EIT) supplies and services must meet the applicable accessibility standards at 36 CFR Part 1194. Accessibility Standards are published by the United States Access Board at http://www.access-board.gov/gs.htm.

3.1.6 Known Errors

If the contractor is aware of an error in a referenced document that could result in cost increases or a significant safety risk, the contractor shall notify the Contracting Officer immediately so that the situation can be investigated and any necessary action taken.

3.2 Applicable Documents for Shore Installation Services

The contractor will perform all shore installation services in accordance with the requirements contained in the current version of the SPAWAR Shore Installation Process Handbook (SIPH). All installation documentation, including Base Electronic Systems Engineering Plans (BESEPs), Installation Design Plans (IDPs), and Systems Operation and Verification Test (SOVT) documents, delivered under this contract shall meet the technical and formatting requirements for these documents contained in the SIPH. Installation practices shall conform to the requirements and standards discussed in Appendix AC of the Shore Installation Process Handbook. For installations occurring at non-Navy facilities, the SIPH will be used unless otherwise directed at the task order level.

3.2.1 Mandatory Shore Requirements Documents

Adherence to the documents listed in Table 2 is a requirement of this SOW during the performance of work at or for shore facilities. The applicability of these documents is discussed in Appendix AC of the SPAWAR Shore Installation Process Handbook. Whenever one of these standards is applicable to an installation task, and the standard states that something "should" be done, the contractor shall do what the standard says "should" be done unless specific permission not do so has been granted by the Contracting Officer or stated in the task order.

3.2.2 Shore Guidance Documents

The documents listed in Table 3 shall be used as guidance to interpret the mandatory requirements documents listed in Table 2 and to show how to meet requirements contained elsewhere in this SOW. The contractor is permitted to deviate from the methods (how to) guidance provided in these documents as long as:

a. The deviation will not increase safety risks.
b. The deviation will not cause a violation of the requirements contained in the SOW or the Mandatory Requirements Documents listed in this SOW.
c. Alternative guidance is used that can be shown to provide an overall benefit to the Government.

3.3 Applicable Documents for Afloat Installation Services

Except for special situations discussed in the following Subsection 3.3.4, the contractor will perform all afloat (ship and submarine) installation services in accordance with the requirements contained in the current version of the NAVSEA Navy Modernization Process Management and Operations Manual (NMP-MOM) (also known as the "One Book"). All installation documentation, including Memorandums of Agreement, Ship Installation Documents (SIDs), and Systems Operation and Verification Test (SOVT) documents, delivered under this contract shall meet the technical and formatting requirements for these documents contained in the NMP-MOM and in this SOW. Installation practices shall conform to the requirements and standards identified in this statement of work.

3.3.1 Mandatory Shipboard and Submarine Requirements Documents

Adherence to the documents listed in Table 4 is a requirement of this SOW during the performance of work on or for ships, submarines, and other afloat platforms. Whenever one of these standards is applicable to an installation task, and the standard states that something "should" be done, the contractor shall do what the standard says "should" be done unless specific permission not do so has been granted by the Contracting Officer or stated in the task order.

3.3.2 Shipboard and Submarine Guidance Documents

The documents listed in Table 5 shall be used as guidance to interpret the mandatory requirements documents listed in Table 4 and to show how to meet the requirements contained elsewhere in this SOW. The contractor is permitted to deviate from the methods (how to) guidance provided in these documents as long as:

a. The deviation will not increase safety risks.
b. The deviation will not cause a violation of the requirements contained in the SOW or the Mandatory Requirements Documents listed in this SOW.
c. Alternative guidance is used that can be shown to provide an overall benefit to the Government.

3.3.3 Mandatory NAVSEA Standard Items

The NAVSEA Standard Items listed in Table 6 shall be complied with for all Navy afloat tasks issued under this contract whenever they can be applied to the work being performed. Other NAVSEA Standard Items shall be complied with when invoked by

task orders. Unless otherwise specified, the version of the NAVSEA Standard Item in effect on the date that a task order is issued shall be followed. The most recent versions available at the time this was written are listed in Table 6. Use these versions for solicitation bidding purposes.

3.3.4 Exceptions to Afloat Standards

The afloat (shipboard and submarine) standards previously discussed shall apply to all SPAWAR installations even when the installation will occur on a commercial vessel or Military Sealift Command Ship unless specific permission to substitute a commercial standard has been granted in writing by the Contracting Officer. In order to obtain permission to substitute a commercial standard, the contractor may be required to provide a copy of the standard to the Contracting Officer, SPAWAR 4.2, or the cognizant Program Executive Office (PEO) Design Authority for review. In general, the Military Standards that apply to C4ISR installations can be followed on both commercial vessels and Navy ships, so permission to deviate from these standards will rarely be granted. If the installation is governed by a SPAWAR Installation Requirements Drawing (IRD), approval may be required from the PEO Design Authority for the IRD in order to allow the use of commercial standards. This internal Government process could take an indefinite period of time. The contractor shall forward any exception requests to the Government as soon as the contractor is aware that an exception is necessary.

3.3.4.1 American Bureau of Shipping (ABS) Standards

The substitution of ABS Standards for the standards listed in this SOW is not allowed under this SOW unless a specific authorization has been made by the contracting officer. At the time this SOW was written, many of these standards were available from https://www.podonlinesystems.com/abs/order.asp?CatID=2. Many of the documents were available at no charge. These documents can be used as guidance when they are applicable and when they do not conflict with the standards called out in the SOW. "ABS" has rep

3.4 Earned Value Management (EVM) Standards and Guidance

The references that apply to EVM are identified in Section 4.1.4.

3.5 Packaging Standards and Guidance

The references that apply to packaging are identified in Section 4.2.9.1.

Table 2 – Mandatory Requirements Documents for Shore Installations

Item	Document Number See Note 1.	Title	Source
3.2.1.1	DoD 5220.22-M	National Industrial Security Program Operating Manual (NISPOM)	http://www.dtic.mil/whs/directives/corres/dir.html
3.2.1.2	(Standards -29 CFR), Part 1910	Occupational Safety and Health Standards	www.OSHA.gov
3.2.1.3	(Standards -29 CFR), Part 1926	Safety and Health Regulations for Construction	www.OSHA.gov
3.2.1.4	NFPA 51B (2009 Edition)	Standard for Fire Prevention During Welding, Cutting, and Other Hot Work	http://www.nfpa.org/catalog/product.asp?pid=51B09&src=nfpa&order_src=A292
3.2.1.5	IEEE Std 1428™-2004	IEEE Guide for Installation Methods for Fiber-Optic Cables in Electric Power Generating Stations and in Industrial Facilities	http://ieeexplore.ieee.org/iel5/9913/31520/01470007.pdf
3.2.1.6	NFPA 70 (2008 Edition)	National Fire Protection Association (NFPA), National Electrical Code	NFPA (nfpacatalog.org)
3.2.1.7	C2-2007 (2007 Edition)	Institute of Electrical and Electronics Engineers (IEEE) National Electrical Safety Code	IEEE (http://standards.ieee.org/nesc/)
3.2.1.8	NPFA 780 (2008 Edition)	National Fire Protection Association, Standard for the Installation of Lightning Protection Systems	NFPA (nfpacatalog.org)
3.2.1.9	SIPH Version 3.0	SPAWAR Shore Installation Process Handbook	SPAWAR
3.2.1.10	UFC 3-560-01 (with Change 3 dated 17 Sep 2009)	Unified Facilities Criteria, (UFC) 3-560-01, Electrical Safety, O & M	http://www.wbdg.org
3.2.1.11	UFC 3-600-01	Unified Facilities Criteria, Fire Protection Engineering for Facilities	http://www.wbdg.org

Item	Document Number See Note 1.	Title	Source
3.2.1.12	EM 385-1-1 (dtd 15 Sep 2008)	U.S. Army Corps of Engineers Safety and Health Requirements Manual	http://www.swl.usace.army.mil/safety/EM_385_1_1_20031103.htm
3.2.1.13	OPNAVINST 5100.23G (dtd 30 Dec 05)	Navy Safety and Occupational Health Program Manual	http://doni.daps.dla.mil/default.aspx
3.2.1.14	MIL-STD-188-124B with Change Notice 3	Military Standard, Grounding, Bonding, and Shielding for Common Long Haul/Tactical Communication Systems Including Ground Based Communications-Electronics Facilities and Equipments.	http://assist.daps.dla.mil/quicksearch/
3.2.1.15	IA PUB-5239-22/ October 2003	Protected Distribution System (PDS) Publication	https://infosec.navy.mil or https://www.mfp.usmc.mil/TeamApp/security/Topics/20061115193016/5239-22USN-USMC070803_30Sep03_Rev1RFW.doc
3.2.1.16	NSTISSAM TEMPEST/2-95 (3 Feb 2000)	RED/BLACK Installation Guidance	SPAWAR Code 4.2
3.2.1.17	SPAWAR 0101, 108A	Naval Shore Electronics Criteria, Naval Security Group Elements	SPAWAR Code 4.2
3.2.1.18	TIA-568-C.1 (February 2009)	Commercial Building Telecommunications Cabling Standards - Part 1: General Requirements	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.19	TIA-569-B (October 2004)	Commercial Building Standard for Telecommunications Pathways and Spaces	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.20	ANSI/TIA-942-2005	Telecommunications Infrastructure Standard for Data Centers.	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.20-1	with TIA-942-1 (March 2008)	Data Center Coaxial Cabling Specifications and Application Distances	http://www.tiaonline.org/standards/catalog/index.cfm

Item	Document Number See Note 1.	Title	Source
3.2.1.21	TIA-758-A	Customer-owned Outside Plant Telecommunications Infrastructure Standard	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.22	TIA-590-A	Standard for Physical Location and Protection of Below-Ground Fiber Optic Cable Plant	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.23	J-STD-607A (October 2002)	Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications	http://www.tiaonline.org/standards/catalog/index.cfm
3.2.1.24	MIL-STD-1472F with Change Notice 1	Human Engineering	http://assist.daps.dla.mil/quicksearch/
3.2.1.25	ANSI/NECA/BICSI 568-2006	ANSI/NECA/BICSI 568-2006, Standard for Installing Commercial Building Telecommunications Cabling	https://www.bicsi.org/cgi-bin/msascartlist.dll/ProductInfo?productcd=BICSI-568-CDROM-2006
3.2.1.26	36 C.F.R. Part 1194	Electronic and Information Technology Accessibility Standards (Section 508)	http://www.access-board.gov/sec508/standards.htm
3.2.1.27		SPAWAR IRD Standard, Version 1.5	SPAWAR Code 4.2
3.2.1.28	ANSI/ASSE A10.32-2004	Fall Protection Systems	http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FASSE+A10.32-2004
3.2.1.29	ANSI/ASSE Z359.1-2007	Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components	http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2fASSE+Z359.1-2007
3.2.1.30		System Operational Verification Test (SOVT) Preparation and Execution Guide (SPEG) for Ship, Shore, and Submarine Installations, Version 1.2	SPAWAR Code 4.2

Notes:

1. Document versions listed are the versions that were current when they were added to the SOW. Unless otherwise specified, the version of the document that is in effect when the individual task order is issued shall be complied with.
2. See Appendix AC of the SPAWAR SIPH for more information on the application of the standards that apply to shore installations.

Table 3 – Guidance Documents for Shore Installations

Item See Note 1.	**Document Number** See Note 2.	**Title**	**Source**
3.2.2.1	SPAWARINST 5100.9D	Navy Shore Electronics Safety Precautions	SPAWAR Code 4.2
3.2.2.2	NFPA 70E-2009	Electrical Safety in the Workplace	http://www.nfpa.org/catalog/product.asp?pid=70E09&order_src=A943
3.2.2.3	MIL-HDBK-881A (30 July 2005)	Work Breakdown Structures for Defense Materiel Items	http://assist.daps.dla.mil/quicksearch/
3.2.2.4	TDMM (11th Edition, 2006)	Telecommunications Distribution Methods Manual, 11th Edition	http://www.bicsi.org/content/index.aspx?file=tdmpubs.htm
3.2.2.5	(OSPDRM). (Feb 2007)	OSP Design Reference Manual, 4th Edition	http://www.bicsi.org
3.2.2.6	MIL-HDBK-419A	Grounding, Bonding, and Shielding for Electronic Equipments and Facilities, Volume II of 2 Volumes, Applications	http://assist.daps.dla.mil/quicksearch/
3.2.2.7		Department of the Navy Fall Protection Guide for Ashore Facilities	http://www.safetycenter.navy.mil/osh/downloads/AshoreFallProtectionGuide.pdf
3.2.2.8*		U.S. Navy Style Guide	http://www.navy.mil/tools/view_styleguide_all.asp
3.2.2.9*		Associated Press Stylebook	http://www.apstylebook.com/?ref=google&gclid=CKHTupb93pUCFQqGGgodDUnKYg
3.2.2.10*	DoD 4000.25-2-M	MILSTRAP Manual	http://www.dla.mil/j-6/dlmso/elibrary/manuals/MILSTRAP/default.asp
3.2.2.11*	DoD 4140.27-M	Shelf-Life Management Manual	https://www.shelflife.hq.dla.mil/policy_DoD4140_27.aspx

Item See Note 1.	**Document Number** See Note 2.	**Title**	**Source**
3.2.2.12 *	MIL-HDBK-245D	Preparation of Statement of Work (SOW)	http://assist.daps.dla.mil/quicksearch/basic_profile.cfm?ident_number=53962
3.2.2.13	ANSI/ASHRAE Standard 140-2004	Standard Method of Test for the Evaluation of Building Energy Analysis Computer Programs	http://www.ashrae.org/publications/page/1285

1. Items with an asterisk also apply to afloat installations. See Table 5.
2. Document versions listed are the versions that were current when they were added to the SOW. Unless otherwise specified, the version of the document that is in effect when the individual task order is issued shall be used for guidance.

Table 4 – Mandatory Requirements Documents for Shipboard and Submarine Installations

Item See Note 1.	**Document Number** See Note 2.	**Title**	**Source**
3.3.1.1	(Standards -29 CFR), Part 1915	Occupational Safety and Health Standards for Shipyard Employment	www.OSHA.gov
3,3,1,2	OPNAVINST 5100.19E	Navy Safety and Occupational Health (SOH) Program Manual for Forces Afloat	http://safetycenter.navy.mil/instructions/OSH/5100-19E/default.htm
3.3.1.3	MIL-STD-1310H (17 Sep 2009)	Shipboard Bonding and Grounding, and other Techniques for Electromagnetic Compatibility, Electromagnetic Pulse (EMP) Mitigation, and Safety.	http://assist.daps.dla.mil/quicksearch/
3.3.1.4	MIL-STD-2042B	Fiber Optic Cable Topology Installation Standard Methods for Naval Ships	http://assist.daps.dla.mil/quicksearch/
3.3.1.5	NAVSEA TECHNICAL SPEC 9090-310E (April 2009)	Alterations to Ships Accomplished by Alteration Installation Teams	**https://www.nde.navy.mil/ (The Fleet Modernization Program (FMP) website has moved behind the Navy Data Enterprise (NDE) portal.)**
3.3.1.6	NAVSEA TECHNICAL SPEC 9090-600	Ship Alteration (ShipAlt) Installation Drawing (SID) Preparation	https://www.nde.navy.mil/
3.3.1.7	NAVSEA SL720-AA-MAN-030	Navy Modernization Process Management and Operations Manual (also known as the "One Book")	https://www.nde.navy.mil/
3.3.1.8	NAVSEA S9AA0-AB-GOS-010	GENERAL SPECIFICATIONS FOR OVERHAUL OF SURFACE SHIPS (GSO) INCLUDING HE AEGIS SUPPLEMENT (NAVSEA S9AA0-AB-GOS-030 SUPPL)	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number: 0910LP1026971

Item	Document Number See Note 1.	Title	Source
3.3.1.9	NAVSEA S9070-AA-MME-010/SSN/SSBN	Guidance Manual for Temporary Submarine Alterations	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number: 0910LP5702600 Note: Available from TDMIS web site once access is obtained.
3.3.1.10	NAVSEA S9074-AQ-GIB-010/248	Requirements for Welding and Brazing Procedure and Performance Qualification	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number: 0910LP7314500
3.3.1.11	NAVSEA T9074-AD-GIB-010/1688 or T9074-AD-GIB-010	Requirements for Fabrication, Welding, and Inspection of Submarine Structure or Fabrication, Welding & Inspection of HY-80/100 Submarine Applications	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number: 0910LP7313400
3.3.1.12	MIL-HDBK-881A	Work Breakdown Structures for Defense Materiel Items	http://assist.daps.dla.mil/quicksearch/
3.3.1.13	SE000-01-IMB-010	Navy Installation and Maintenance Book, Volume ID N0002400003	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number: 0910LP0039770
3.3.1.13 a	SE000-00-EIM-110	Navy Installation and Maintenance Book, (NIMB) Installation Standards (See Note 4.)	https://nll.ahf.nmci.navy.mil/web/order/detail.cfm?stock_number=0910LP0039770

Item	Document Number See Note 1.	Title	Source
3.3.1.13 b	SE000-00-EIM-100	Electronics Installation and Maintenance Book , General (Section 3-4 is General Safety Precautions and Policies)	https://nll.ahf.nmci.navy.mil/web/order/detail.cfm?stock_number=0910LP0039770 See also http://www.uscg.mil/Petaluma/TPF/ET_SMS/documents/GENERAL_HANDBOOK.PDF
3.3.1.14	SPAWARINST 4720.5	SPAWAR Installation Requirements Drawing Standard	SPAWAR 4.2
3.3.1.15	MIL-STD-1689A 23 Nov 1990	Fabrication, Welding, and Inspection of Ships Structure	http://assist.daps.dla.mil/quicksearch/
3.3.1.16	MIL-STD-2003A Dated 3 Sep 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines	http://assist.daps.dla.mil/quicksearch/
3.3.1.16 -1	MIL-STD-2003-1A 3 September 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines (Cable)	http://assist.daps.dla.mil/quicksearch/
3.3.1.16 -2	MIL-STD-2003-2A 3 September 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines (Equipment) (Section 2 of 5 Sections	http://assist.daps.dla.mil/quicksearch/
3.3.1.16 -3	MIL-STD-2003-3A 3 September 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines (Penetrations)	http://assist.daps.dla.mil/quicksearch/
3.3.1.16 -4	MIL-STD-2003-4A 3 September 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines (Cableways)	http://assist.daps.dla.mil/quicksearch/

Item	Document Number See Note 1.	Title	Source
3.3.1.16-5	MIL-STD-2003-5A 3 September 2009	Electric Plant Installation, Standard Methods for Surface Ships & Submarines (Connectors)	http://assist.daps.dla.mil/quicksearch/
3.3.1.17	NSTISSAM TEMPEST/2-95 (3 Feb 2000)	RED/BLACK Installation Guidance	SPAWAR Code 4.2
3.3.1.18	IA PUB 5239-31	Information Assurance Shipboard Red/ Black Installation Publication	https://infosec.navy.mil
3.3.1.19	NAVSEA Notice 5000	Activities Authorized to Perform SUBSAFE work	NAVSEA 92Q Or try http://store.ihs.com/specsstore/controller?event=LINK_DOCDETAILS&mid=W097&getCurVer=false&docId=IWCZHBAAAAAAAAAA&mid=W097
3.3.1.20	NAVSHIPS 0902-LP-018-2010 Stock Number: 0902-LP-641-0492	Overhaul Specifications for Deep Diving SSBN/SSN Submarines	https://nll2.ahf.nmci.navy.mil/web/order/detail.cfm?stock_number=0902LP6410492 Note: Available from TDMIS web site once access is obtained.
3.3.1.21	COMFLTFORCOMINST 4790.3	Joint Fleet Maintenance Manual	http://www.submepp.navy.mil/jfmm/documents%5C00_jfmm.pdf or try http://www.fas.org/nuke/guide/usa/doctrine/navy/jfmm/FORWARD.htm
3.3.1.22	SECNAVINST 5100.16B (11 April 2008)	Navy Gas Free Engineer Certification/Recertification	http://doni.daps.dla.mil/Directives/05000%20General%20Management%20Security%20and%20Safety%20Services/05-100%20Safety%20and%20Occupational%20Health%20Services/5100.16B.pdf

Item	Document Number See Note 1.	Title	Source
3.3.1.23	S0400-AD-URM-010/TUM	Tag-Out Users Manual	http://www.submepp.navy.mil/jfmm/tum/tag_out.pdf
3.3.1.24 &* 3.2.1.24	MIL-STD-1472F with Change Notice 1	Human Engineering	http://assist.daps.dla.mil/quicksearch/
3.3.1.25	(See Note 3.)	NAVSEA Standard Items (See Note 2)	http://www.sermc.surfor.navy.mil/SSRAC1/standard.htm
3.3.1.26 &* 3.2.1.30		System Operational Verification Test (SOVT) Preparation and Execution Guide (SPEG) for Ship, Shore, and Submarine Installations	SPAWAR 4.2
3.3.1.27	0967-LP-177-3020 (1980)	Installation Details, Shipboard Communications Antenna Systems	https://mercury.tdmis.navy.mil
3.3.1.28 &* 3.2.1.1	DoD 5220.22-M	National Industrial Security Program Operating Manual (NISPOM)	http://www.dtic.mil/whs/directives/corres/dir.html

Notes:

1. Items with an asterisk also apply to shore installation and show the Item Number from Table 2.
2. Document versions listed are the versions that were current when they were added to the SOW. Unless otherwise specified, the version of the document that is in effect when the individual task order is issued shall be complied with.
3. NAVSEA Standard Items are listed separately in Table 6.
4. http://www.sermc.surfor.navy.mil/SSRAC1/2-e_4-e/4-e11/F-PHRASE_FY11.pdf says "USE SE000-01-IMB-010, NAVY INSTALLATION AND MAINTENANCE BOOK (NIMB), SECTION IX, INSTALLATION STANDARDS (SOURCE CD: N0002400003)".

Table 5 – Guidance Documents for Shipboard and Submarine Installations

Item (Note 1)	**Document Number** (Note 2)	**Title**	**Source**
3.3.2.1	MIL-HDBK-299 (SH)	Cable Comparison Handbook Data Pertaining to Electric Shipboard Cabling	http://assist.daps.dla.mil/quicksearch/
3.3.2.2	MIL-HDBK-454B	General Guidelines For Electronic Equipment	http://assist.daps.dla.mil/quicksearch/
3.3.2.3	MIL-HDBK-502	Acquisition Logistics	http://assist.daps.dla.mil/quicksearch/
3.3.2.4	NAVSEA S9407-AB-HBK-010	Handbook of Shipboard Electromagnetic Shielding Practices	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number 0910LP1019360
3.3.2.5	MIL-HDBK-290	Standard Electrical Symbol List	http://assist.daps.dla.mil/quicksearch/
3.3.2.6	S9073-A2-HBK-010	A Users Guide of Installation and Inspection Information; US Navy Resilient Mount Handbook	https://nll2.ahf.nmci.navy.mil/web/order/ Note: Also available from TDMIS web site.
3.3.2.7	S9300-A6-GYD-010	Electrical Workmanship Inspection Guide for Surface Ships and Submarines	https://nll2.ahf.nmci.navy.mil/web/order/
3.3.2.8	SW225-A0-MMA-010	Theory of Combat System Alignment	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number 0640LP1015977
3.3.2.9	NAVSEA 0900-LP-007-9010	Electric Shock, Its Causes and Its Prevention	https://nll2.ahf.nmci.navy.mil/web/order/ Stock Number 0900LP7414116
3.3.2.10 &* 3.2.2.8		U.S. Navy Style Guide	http://www.navy.mil/tools/view_styleguide_all.asp
3.3.2.11 &* 3.2.2.9		Associated Press Stylebook	http://www.apstylebook.com/?ref=google&gclid=CKHTupb93pUCFQqGGgodDUnKYg
3.3.2.12 &* 3.2.2.10	DoD 4000.25-2-M	MILSTRAP Manual	http://www.dla.mil/j-6/dlmso/elibrary/manuals/MILSTRAP/default.asp

Item (Note 1)	**Document Number** (Note 2)	**Title**	**Source**
3.3.2.13 &* 3.2.2.11	DoD 4140.27-M	Shelf-Life Management Manual	https://www.shelflife.hq.dla.mil/policy_DoD4140_27.aspx
3.3.2.14 &* 3.2.2.12	MIL-HDBK-245D	Preparation of Statement of Work (SOW)	http://assist.daps.dla.mil/quicksearch/basic_profile.cfm?ident_number=53962

Notes:

1. Items with an asterisk (*) also apply to shore installations and show Item Numbers from Table 3.
2. Document versions listed are the versions that were current when they were added to the SOW. Unless otherwise specified, the version of the document that is in effect when the individual task order is issued shall be complied with.

Table 6 – Mandatory NAVSEA Standard Items
(Source: http://www.sermc.surfor.navy.mil/SSRAC1/standard.htm)

STANDARD ITEM NUMBER	TITLE	UTILIZATION CATEGORY	DATE
009-01	General Criteria; accomplish	I	24 JUL 2009
009-02	Environmental Compliance Reports for Material Usage at Naval Facilities; provide	I	01 AUG 2008
009-03	Toxic and Hazardous Substances; control	I	24 JUL 2009
009-04	Quality Management System; provide	I	24 JUL 2009
009-05	Temporary Accesses; provide	I	24 JUL 2009
009-07	Confined Space Entry, Certification, Fire Prevention and Housekeeping; accomplish	I	24 JUL 2009
009-16	Electronic Equipment; repair	II	01 AUG 2008
009-22	Shipboard Electric Cable; Test	II	19 JUL 2007
009-23	Interferences; remove and install	I	24 JUL 2009
009-24	Authorization, Control, Isolation, Blanking, and Tagging Requirements; accomplish	I	24 JUL 2009
009-32	Cleaning and Painting Requirements; accomplish	II	24 JUL 2009
009-60	Schedule and Associated Reports; provide and manage	I	24 JUL 2009
009-73	Shipboard Electrical/Electronic/Fiber Optic Cable; remove, relocate, repair, and install	I	24 JUL 2009
009-76	Waveguide and Transmission Line Temporary Lay-Up, Pressurization, and Purging; accomplish	II	19 JUL 2007
009-92	Resilient Mount; remove and install	II	19 JUL 2007
009-102	Alteration Verification; provide	I	19 JUL 2007
009-103	Weight and Moment Change Data; provide	I	19 JUL 2007
009-109	Special Requirements for Non-SUBSAFE Work on SUBSAFE Certified Vessels; accomplish	I	19 JUL 2007
009-110	Special Requirements for Non-Nuclear Work on Nuclear Vessels; accomplish	I	19 JUL 2007

4.0 REQUIREMENTS

4.1 Program and Project Management

Upon award, the contractor shall assign a single Program Manager to act as the single point of contact for the IMO, senior Government managers, Contracting Officer (KO), and Contracting Officer's Representative (COR) for all matters involving contract performance. The Program Manager shall have overall responsibility for the successful execution of all work to be performed under the contract and will be considered by the Government to be fully accountable for all aspects of performance under the contract. The Program Manager shall have the requisite authority for full control over all company resources necessary for contract performance. The Program Manager shall have authority to approve task order proposals in emergent situations. The Program Manager shall participate in regular weekly status meetings with the IMO and shall be required to participate in and support the semi-annual Program Management Reviews described in Section 4.1.1. This support may include input to budget estimates and developing installation concepts and plans for large scale or high visibility programs.

4.1.1 Program Management Reviews (PMRs)

The contractor shall conduct PMRs at least semi-annually, which will be divided into a programmatic and a technical section. The contractor shall address schedule status, progress against major milestones, configuration management, manufacturing, engineering, logistics, reliability, quality assurance, and subcontractor status at all PMRs. The contractor shall coordinate the PMR agenda, schedule, and location with the COR. The contractor shall provide the Conference Agenda (CDRL A004) and Meeting Minutes (CDRL A010) in accordance with the appropriate CDRL's requirements, for Government approval. The Program Manager and other contractor personnel shall be present at the PMR as needed to address the agenda.

4.1.2 Weekly Status Meetings

The contractor shall attend weekly staff meetings and provide insight into status of current task orders. Topics will include but are not limited to resource loading, schedule, quality, and challenges. The use of EVM data at the subtask level will generate the discussion on finances. Discussions shall include contractor data from the Tracking Progress vs Expectations Spreadsheet (which will be provided as an attachment to the individual Task Order). The meetings will be held with the IMO and staff. The meetings will be held via VTC or locally at SSC Pacific/Atlantic.

4.1.3 Weekly Task Order Progress and Status Report

When a Task Order states that a weekly Earned Value Management Report update is not required for a task or sub-task, a *Weekly Task Order Progress and Status Report* (CDRL A002) for the task or sub-task shall be emailed to the COR and to the IMOs no later than close of business (COB) every Friday. The initial report shall be required on the first Friday following the first full week after the Task Order award. The initial report shall include a projected Plan of Action and Milestones (POA&M). The weekly progress report shall, at a minimum, include the following items and data:

a. Percentage of work completed
b. Percentage of funds expended per ship/sub/shore command and system
c. Updates to the POA&M and narratives to explain any variances
d. If applicable, notification when expended costs have exceeded 75% of the amount authorized (See contract clause H-344.)
e. Identification of major problem areas including technical issues, cost increases or schedule slippages

4.1.4 Earned Value Management (EVM)

Unless specifically exempted in the task order document (See Section 4.1.3.), all task orders shall be managed and tracked using an EVM system that is tailored using the guidance in the *Department of Defense Earned Value Management Implementation Guide* (EVMIG). **In addition to any EVM requirements called out in an individual task order, if the provision DFARS 252.234-7001 is incorporated in a Task Order RFP, the contractor shall ALSO follow the requirements set forth in Section 4.1.4.6 below**. (This document should be available from http://guidebook.dcma.mil/79/EVMIG.doc) The EVM System (EVMS) shall in all cases:

a. Relate resource planning to schedules and technical performance requirements
b. Integrate technical performance, cost, schedule, and risk management
c. Provide the integrated management information to plan the timely performance of work, budget resources, account for costs, and measure actual performance against plans and by Work Breakdown Structure (WBS) element
d. Have the capability to predict, isolate, and identify variances and the factors causing the variances

4.1.4.1 Report Format

All EVM reports (CDRL A015) shall be provided electronically in a standardized Microsoft Excel compatible file format that is readable using standard NMCI Microsoft Excel software.

4.1.4.2 Definitions

Definitions of EVM system data elements, for the purpose of interpreting this SOW shall be in accordance with the American National Standards Institute /Electronic Industries Association Standard 748-B, Earned Value Management Systems (ANSI/EIA – 748B) and the previously mentioned Department of Defense Earned Value Management Implementation Guide (EVMIG).

4.1.4.3 EVM Minimum Required Data Elements

The following data elements shall appear on all EVM system (EVMS) reports (CDRL A015) provided to the Government. A report shall be provided for each task order and sub-task within a task order (identified by Government Job ID Number) containing:

a. Contract Number
b. Task Order Number
c. Sub-Task Government Job ID Number (when applicable)
d. Hull Number (e.g., FFG-7, applies to Afloat Installations Only)
e. Command (applies to Shore Installations)

f. Site Location
g. Installation Title/Description
h. Budget at Completion (BAC) for the Task Order or Sub-Task expressed as a cumulative value for the entire task or sub-task. (See EVMIG.)
i. Budgeted Cost for Work Scheduled (BCWS or Planned Value). This shall be the sum of the performance budgets for all work scheduled to be accomplished as of the "as-of" date of the report. (See EVMIG.)
j. Budgeted Cost for Work Performed (BCWP or Earned Value). The value of completed work, as of the "as-of" date of the report, expressed as the value of the performance budget assigned to that work.
k. Actual Cost of Work Performed (ACWP or Actual Cost). The cumulative costs actually incurred and recorded in accomplishing the work performed as of the "as-of" date of the report. When applicable (for all but the first report), the value of the work accomplished between the report's "as-of" date and the previous report's "as-of" date shall also be provided.
l. Cumulative Labor Hours charged to the task or sub task as of the "as-of" date of the report. When applicable (for all but the first report), the labor hours expended between the report's "as-of" date and the previous report's "as-of" date shall also be provided.
m. Estimate at Completion (EAC). The estimated total cost for all authorized work. Equal to the sum of actual costs to date (including all allocable indirect costs), plus the estimated costs to completion (estimate to complete)
n. Estimated total Labor Hours at Completion
o. Installation Start Date. This is the date that physical installation work is scheduled to start (or started) on the afloat platform or shore site. It does not include work such as site surveys, and ship checks. It does not include the delivery of material or equipment with no installers present.
p. Installation Stop Date. This is the date that the contractor is scheduled to or has turned over installation work at the platform to the Government for acceptance.
q. Percent Complete. This is equal to 100% times the BCWP (as of the "as-of" date of the report) divided by the Budget at Completion (BAC). The BAC is the sum of all performance budgets established for the task order or subtask covered by the report.
r. Percent Spent. This is equal to 100% times the ACWP (as of the "as-of" date of the report) divided by the BAC.
s. Cost Performance Index (CPI). This is equal to the Budgeted Cost for Work Performed (as of the "as-of" date of the report) divided by the Actual Cost of Work Performed.
t. Schedule Performance Index (SPI). The SPI is equal to the Budgeted Cost for Work Performed (as of the "as-of" date of the report) divided by the Budgeted Cost for Work Scheduled.
u. Variance at Completion. This is the difference between the budget at completion and the estimate at completion or, VAC = BAC - EAC. It represents the amount of expected overrun (negative VAC) or underrun (positive VAC).

v. "As-of" date. This is the date as of which the data presented is accurate and reflects all known charges made up to that date. It shall be no more than six business days earlier than the date the report is provided to the Government.

4.1.4.4 Work Breakdown Structure (WBS) and Cost Accounting

The contractor shall utilize the applicable Work Breakdown Structure (WBS) provided in Attachment 1 for EVM reporting and to report cumulative final expenditures for each task order and for each sub-task within a task order. The final report data shall be consistent with the data on the EVM system (EVMS) reports. Each expenditure attributed to a task shall be individually described and assigned to the appropriate WBS element within the EVM database. The contractor shall be able to automatically sort, report, and account for individual expenditures attributed to each applicable WBS element shown on the block diagrams in Attachment 1. Submitted weekly EVM reports (CDRL A015) shall provide combined ("rolled up") total labor, materials, travel, and Other Direct Charge (ODC) expenditures (shown in tan boxes in Attachment 1) for each task order and subtask. A final actual cost report shall also be provided for each task order, with separate cost data provided for each task or sub-task with a Task Identification Number (TID), upon completion. This final report (CDRL A007) shall provide the final costs for all WBS elements (every applicable box) shown on the block diagrams in Attachment 1. (Note: The contractor shall also ensure that all cost estimate submittals are consistent with the WBSs shown in Attachment 1. This is to enable actual costs to be compared to estimated costs for every applicable element shown on the block diagrams in Attachment 1. However, cost estimate submittals may be required to provide a greater level of detail than the diagrams shown in Attachment 1.)

4.1.4.5 Use of EVMS Information

The contractor shall use the EVMS information to develop alternative solutions and implement corrective action. The contractor shall use the EVMS information to generate the progress and financial reports. The reports shall analyze and track scheduled versus actual events, including, but not limited to cost analysis and status by task order. The reports shall identify any issues and risk elements, and recommend methods to mitigate those risks. The contractor shall produce a Performance Measurement Baseline (PMB) that integrates contract work scope; schedule and budget to achieve a realistic, executable contract plan.

4.1.4.6 Contractor Integrated Performance Management

The Contractor utilizes its existing, internal Integrated Program Management System (IPMS) to plan, schedule, budget, monitor, manage, and report cost, schedule, and technical status applicable to the contract. The Contractor's internal program management system serves as the single, formal, integrated system that meets both the Contractor's internal management requirements and the requirements of the Government for timely, reliable, and auditable performance information. The application of these concepts provides for early indication of contract cost, schedule, and technical challenges. Earned value assessments correlate with technical achievement. The outputs of this system are used as the basis to report detailed performance status during program management reviews and other status meetings. The

Contractor's system shall be compliant with the Industry Guidelines delineated in the ANSI/EIA-748, Earned Value Management System (EVMS), the general provisions of the contract, and this SOW. The Contractor need not establish a separate or unique internal program management system for purposes of planning, scheduling, directing, statusing, recording or reporting.

Reference:

DFARS 252.234-7001 - Notice of Earned Value Management System

DFARS 252.234-7002 - Earned Value Management System

CDRL A024- Integrated Program Management Report (DI-MGMT-81861)

4.1.4.6.1 Integrated Subcontract Management and Reporting

The Contractor shall flow down the requirements of DFARS clauses 252.234-7001 and 252.234-7002, and the Integrated Program Management Report (IPMR) (DI-MGMT-81861), to subcontractors meeting the applicable thresholds (e.g. exceeding $20 million in then-year dollars). EVMS flow down to subcontractor cost or incentive contracts of less than $20 million in then-year dollars, or to Firm Fixed Price subcontracts is a risk-based decision to be mutually agreed on between the prime Contractor and the Government. Any subcontractor with a contractual flow down requirement for EVM should also be included in the Integrated Baseline Review (IBR) process. A separate IBR may be conducted at the subcontractor's facility, in which case the prime Contractor shall take the lead in conducting the IBR, with active Government participation. Alternatively, the subcontractor may participate as part of the prime contract IBR. On subcontracts where EVM and IMS requirements are not flowed down, subcontracted scope and performance information shall be incorporated/integrated into and reported via the Contractor's integrated performance management system and EVMS. It may also be necessary to conduct IBRs with subcontractors who do not meet the dollar value threshold based on the risk inherent in their work, criticality of their performance to the total program, or percent of the total work share. Exceptions will be mutually agreed upon by the Contractor and the Government.

Reference:
CDRL A024 - Integrated Program Management Report (DI-MGMT-81861)

4.1.4.6.2 Integrated Baseline Review (IBR)

The Contractor shall engage jointly with the Government's program manager and technical staff in conducting Integrated Baseline Reviews (IBRs) focused on evaluating the realism and inherent risks in the Contractor's integrated Performance Measurement Baseline (PMB) plan. The Contractor shall present the contents and underlying/ supporting assumptions of its initial PMB to Government representatives via an IBR to be held at the Contractor's facilities. The initial IBR shall be conducted as soon as feasible after the Task Order is awarded and the associated PMB is fully established and documented but not later than 90 days after contract award.

Subsequent IBRs will be conducted, as needed, throughout the life of the contract following initiation of the Task Order, including undefinitized contract actions, contract modifications, major milestone events, major changes to the baseline, or re-planning. The scope of the IBRs will be tailored to the nature of the work content and/or dollar value issued with the Task Order, and the IBR will be conducted within a reasonable time. Each IBR will verify that the Contractor has established and is maintaining a reliable PMB that includes the entire contract scope of work; is consistent with contract cost targets and schedule requirements; has adequate resources assigned; and uses effective Earned Value (EV) techniques/methods to accurately reflect technical achievement/progress. Each IBR will also record any indications that effective EVM is not being used. IBR planning, preparation and conduct details will be discussed and finalized on a case-by-case basis with the issuance of the Task Order.

Agreement will be reached on:

- The IBR scope and approach, i.e., Contract Line Item Number (CLIN)/Performance Work Schedule (PWS) scope coverage, dates, duration, depth of the event, and preliminary IBR agenda.

- IBR entrance and exit criteria. The government program office Lead will take lead roles in assessing Contractor IBR readiness.

- If the scope of the Task Order and dollar value warrant, pre-IBR support requirements include:

    - Advance IBR artifacts (EVMS output) submittal requirements and IBR schedule (CDRL A025).

    - Contractor participation in Government pre-IBR Workshop activities (e.g., vendor may be asked to send 1-3 representatives (i.e., PM, System Engineering (SE) Lead, Scheduler) to a Government pre-IBR workshop to provide 2-4 hours of PMB, IMS, IBR artifact overview and data traces.

The Contractor shall flow-down IBR requirements to those subcontractors that meet the applicable thresholds for EVM reporting. The prime Contractor shall lead IBRs at subcontractors, with active participation from the Government. During contract performance, the Contractor will provide ongoing access to its records and data that underlie and support the Performance Measurement Baseline and cost and schedule data reported.

Reference:

DFARS 252.234-7002 - Earned Value Management System

4.1.4.6.3 Over Target Baseline (OTB)/Over Target Schedule (OTS)/Restructure

The Contractor may conclude the baseline no longer represents a realistic plan in terms of budget/schedule execution. In the event the Contractor determines an OTB/OTS/Restructuring action is necessary, the Contractor must obtain customer approval prior to implementing an OTB/OTS/Restructuring action. The request should also include detailed implementation procedures as well as an implementation timeframe. The Contractor will not implement the OTB/OTS/Restructuring prior to receiving written approval from the Contracting Officer.

4.1.4.6.4 Integrated Master Schedule (IMS)(IPMR Format 6)

The Contractor shall develop, maintain, and deliver a logically networked Integrated Master Schedule (IMS) in accordance with the DoD Integrated Master Plan and Integrated Master Schedule Preparation and User Guide, DI-MGMT-81861, Format 6, and tailoring instructions provided in CDRL A024, Integrated Program Management Report (IPMR). The IMS shall contain the planned events and milestones, all activities from contract award to contract completion, activity entrance and exit criteria, and risks/risk mitigation activities identified and documented in the Contractor's Risk Management Plan (RMP). The IMS shall also reflect the tasks, dates (baseline, forecast, and actual), external and internal dependences and relationships necessary to support independent accurate forecasts of contract milestone delivery dates by both the Contractor and the Government. The IMS shall be developed, maintained and reported consistently and in conjunction with the Contract Work Breakdown Structure (CWBS) and the IPMR. The Contractor shall support teleconferences, as needed, to discuss IMS progress and issues and shall be available for review at all Government meetings.

Reference:

CDRL A024 - Integrated Program Management Report (DI-MGMT-81861)

4.1.4.6.5 Schedule Analysis/Schedule Risk Assessment (SRA)

A Schedule Analysis section shall be included with the monthly IPMR deliverable as part of Format 5 of the IPMR. This section shall be in accordance with DI-MGMT-81861 and tailoring instructions provided in CDRL A015, Integrated Program Management Report (IPMR).

Schedule Risk Assessment shall be conducted quarterly as outlined in CDRL A024.

Reference:

CDRL A024 - Integrated Program Management Report (DI-MGMT-81861)

4.1.4.6.6 Contract Work Breakdown Structure (CWBS)

The Contractor shall utilize the applicable Work Breakdown Structure (WBS) provided in SOW Attachment 3 for EVM reporting. The final report data shall be consistent with the data on the EVM system (EVMS) reports. The Contractor shall develop an extended CWBS and CWBS dictionary in accordance with the guidelines in DI-MGMT-81334C. The Contractor's organizational entity responsible for systems engineering shall analyze the system requirements specified in the Statement of work (SOW) and translate them into an extended Contract Work Breakdown Structure (CWBS) representing the products and services that comprise the entire work effort commensurate with the contract requirements. The Contractor shall extend the Government provided Program WBS as outlined in CDRL A026 down to appropriate levels required to provide adequate internal management, surveillance, and performance measurement. The Contractor shall use the CWBS as the primary framework for contract planning, budgeting and reporting of cost, schedule and technical performance status to the Government. The Contractor shall maintain, update and deliver the CWBS and the CWBS Dictionary during the execution of the contract in accordance with DI-MGMT-81334C and the tailoring instructions provided in CDRL A026, Contract Work Breakdown Structure. Changes to the CWBS and/or associated CWBS Dictionary definitions at any reporting level require approval of the Government.

Reference:

CDRL A026 - CWBS (DI-MGMT-81334C)

4.1.4.6.7 Contract Fund Status Report (CFSR)

The Contractor shall submit a quarterly CFSR in accordance with DI-MGMT-81468 and the tailoring instructions provided in CDRL A027 Contract Funds Status Report (CFSR). The CFSR will be used by the Contractor and the Government to update and forecast contract funds requirements; to plan and communicate funding changes; to develop funding requirements for approved efforts; to determine funds in excess of contract needs and available for de-obligation; and to obtain rough estimates of termination liability and open commitment costs on all cost reimbursable contract line items. The CFSR shall be prepared by job number, with a rollup to the task order level. All data shall be time phased and displayed in conjunction with Government fiscal years.

Reference:

CDRL A027 - CFSR (DI-MGMT-81468)

4.1.5 Change Order Request Notification (CORN) Process

The purpose of the Change Order Request Notification (CORN) process is to provide prompt notification to the Government of any problems or conditions that are expected to cause a change to the cost or requirements of the work covered by the task order. The contractor shall initiate the CORN process by completing the first part of the CORN form (CDRL A003) on the IMO Global Installation Contract web site within 48 hours of becoming aware of the problem or condition. The contractor shall enter a description of the problem or condition on the CORN form, including a Rough Order of Magnitude

(ROM) estimate for any additional work to be performed. For each CORN that exceeds the simplified acquisition threshold, the contractor shall certify, through the use of an electronic signature on the IMO Global Installation Contract web site, that the request for approval is made in good faith, and that the supporting data are accurate and complete to the best of the contractor's knowledge and belief, as required by DFARS 252.243-7002, *Requests for Equitable Adjustment*.

4.1.5.1 Coordination with Appropriate Representatives

Following the initial CORN entry, the contractor shall provide a detailed description of the problems or conditions and proposed solution to the appropriate Government Representatives for comments and concurrence. For afloat work, the appropriate representatives would be the Navy Technical Representative (NTR) and Ship Supervisor. For shore work, the appropriate representatives would be the Project Engineer and/or the On-Site Government Representative. These and other representatives may be identified on the IMO Global Installation Contract web site.

4.1.5.2 Uploading of Details

Following coordination and concurrence by the appropriate Government Representatives, the contractor shall update the CORN form as necessary and shall upload a detailed description of the problem and proposed solution and detailed cost (including specific labor categories) and scheduling change estimates to the IMO Global Installation Contract web site. The contractor shall notify the cognizant Ordering Officer (from the cognizant task order contracting office) or the Contracting Officer who issued (or is assigned to) the original task order via e-mail. The contractor shall use the IMO Global Installation Contract web site to provide this e-mail notification whenever this capability is available from the web site.

4.1.5.3 Government Review and Response

The Government will review the submitted documents. If the Government review indicates that the CORN form contains insufficient technical information or documentation, the Government will notify the contractor via e-mail to the contractor's POCs identified on the CORN form. The contractor shall update the CORN form to provide any additional information requested within two (2) business days of receipt of the notice.

4.1.5.4 Government Approval

If the CORN is approved, the Contracting Officer will authorize the contractor to proceed with the work by issuing an e-mail. Details on this process will be provided on the IMO Global Installation Contract web site. If the CORN is not approved, the Government will notify the contractor.

4.1.5.5 Liaison Action Record (LAR) Requirement

When a CORN is based on a Ship Alteration (SHIPALT) drawing, the contractor shall develop a Liaison Action Record (LAR) in accordance with the most recent version of NAVSEA Technical Specification Number: TS9090-100. The purpose of this

requirement is to resolve drawing discrepancies and to prevent similar CORNs on future task orders.

4.1.6 Miscellaneous Support Documentation

If tasked within individual task orders, the contractor shall be required to develop various documentation and/or provide on-site support to various events. Typical tasking within this area includes, but is not limited to, the following:

a. Developing, updating, delivering and maintaining project status briefs, milestone charts and presentations (CDRL A004)
b. Developing recommended agendas, establishing systems to track action items, tracking and reporting action item status, and identifying problems/issues (CDRL A004)
c. Participating in program reviews, in-process reviews, technical interchange meetings, and visits to hardware and software manufacturer's plants
d. Providing meeting minutes (CDRL A010) and trip reports. (CDRL A004)
e. Developing white papers, technical reports, technical comments and recommendations (CDRL A003)
f. Drafting, updating, reviewing and providing inputs to program planning and technical documentation (CDRL A003 and CDRL A004)

4.1.6.1 Regional Maintenance and Modernization Coordination Office (RMMCO) Coordination

If required by the Task order, the contractor shall coordinate with Regional Maintenance and Modernization Coordination Offices (RMMCO) or other Government designated gatekeepers for surface, subsurface and shore installations/alterations.

4.1.7 Production Schedules

A production schedule shall be submitted for all installation task orders in a format compatible with Microsoft Project. For installation tasks, the Production Schedule is the same as the POA&M mentioned elsewhere in this Statement of Work. Production schedules shall provide information that is consistent with the applicable standard production schedule template or templates posted on the IMO Global Installation Contract web site, whenever an applicable template is posted on the IMO Global Installation Contract web site. The Production Schedule shall provide a schedule in Gantt chart format that displays the critical path and identifies dependencies between key events and key tasks. The contractor shall update the Production Schedule weekly as required to include any additions, deletions, modifications, progress, and completions. The information provided in the Production Schedules shall be consistent with the information provided in the Earned Value Management System.

4.1.7.1 Afloat Production Schedules

For each ship and submarine (afloat) installation task order and sub-task within a task order (identified by Government Job ID Number), the contractor shall provide an Afloat Production Schedule (CDRL A017) that meets the requirements of NAVSEA Standard Item 009-60.

4.1.7.2 Shore Production Schedules

For each shore installation task order and sub-task within a task order that is identified by a Government Job ID Number, the contractor shall provide a Shore Production Schedule (CDRL A018) that lists all tasks identified in Appendix H of the SIPH that apply to the task order. In addition, the following activities shall be included as separate sub-tasks for the purpose of production scheduling only under the "On-Site Installation" task, whenever they apply. Note: Production scheduling tasks and sub-tasks do not need to have separate Government Job ID numbers. They are not the same as the tasks and sub-tasks discussed in the first sentence.

a. Cabinet Mounting and Grounding
b. Antenna Mounting and Grounding
c. Electrical Wiring Pathway Installation
d. Inside Plant Cable Pathway Installation
e. Outside Plant Cable Pathway Installation
f. Electrical Wiring Installation
g. Signal Cabling Installation
h. Equipment Installation

4.1.8 Manpower Report

The contractor shall submit a Contractor's Manpower Report (CDRL A022) on the SPAWAR Collaboration and Execution (CnE) website. Data shall be submitted for all active task orders. Data shall be a roll-up of all task orders under this contract. At a minimum, the following information shall be reported on the web site:

a. Date of report
b. Contract number
c. Contractor name and cage code
d. Name, phone number and e-mail address of employee submitting report
e. Associated task/delivery Order number(s)
f. Predominant Product Service Code (PSC) reflecting services provided. Definitions of PSCs are available at http://www.loc.gov/contracts/PSC.html.
g. The estimated number of direct Full Time Equivalents (FTEs) under contract during timeframe covered by the report (including applicable subcontractors) and the estimated total annual salary of FTEs for each location where Contractor and sub-Contractors perform work

4.1.8.1 Manpower Report Definitions

The following definitions shall be used when interpreting the above Manpower Report requirements:

a. Location: For temporary offsite duty of less than six months, location is the employee's normal permanent worksite. The CONUS locations to be identified are Metropolitan Statistical Areas (MSAs) as defined in OMB BULLETIN NO. 08 – 01. Hostile areas are defined as within the countries of Iraq or Afghanistan. "Other" location can be used for work performed in any area not otherwise covered by this paragraph. These locations will appear in a pick list/combox box on the CnE web Site.

b. Salary: Salary includes all income that would be reported in Block 1 of IRS Form W-2.
c. Direct FTEs: Direct FTEs are those employees and subcontractor employees whose salary is allowable as a direct cost as defined by FAR 2.101 and DCAAP 7641.90. For fixed price orders, contractors shall apply the same reasoning to determine direct FTEs.

4.1.8.2 CnE Web Site Access

A CAC card is required in order to access the SPAWAR CnE website in order to input required CDRL information. (See Section 7.5.2 of this SOW.) The CnE web site is located at https://cne.spawar.navy.mil. The contractor shall to designate a specific POC and alternate responsible for entering this information and to supply this information to the Contracting Officer's Representative in order to gain access.

4.1.8.3 Web Site Replacement

The Government may designate another web site to replace the CnE site, for manpower reporting purposes, by providing 30 days notification on the IMO Global Installation Contract web site.

4.1.9 Electronic Contractor Manpower Reporting

The contractor shall report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract **for the Navy** via a secure data collection site. The contractor is required to completely fill in all required data fields using the following web address https://doncmra.nmci.navy.mil . Reporting inputs will be for the labor executed during the period of performance during each Government fiscal year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk, linked at https://doncmra.nmci.navy.mil.

4.2 Pre-Intallation Support

Individual task orders may include the following:

4.2.1 Shipchecks/Site Surveys

The Contractor shall conduct inspections of prescribed ships, submarines and shore stations to determine the optimum location and configuration for an equipment/system installation and any site or platform preparation requirements. The Contractor shall be capable of gathering all pertinent environmental, engineering, configuration, and design information relevant to site conditions, analyzing the collected data, performing necessary calculations to make technical recommendations, and preparing technical reports and documentation (CDRL A003) (such as Site Survey In-Briefs and Out-Briefs, Shipcheck Reports, and Site Survey Reports) for a specific installation or a group of installations. Shipchecks may also be required to support development of the following: Ship Change Documents (SCDs), Trident Ship Alterations (TRIDs), Engineering Changes (ECs), Field Changes (FCs), Ship Alterations (SHIPALTs), Operational Alterations (OPALTs), Temporary Alterations (TEMPALTs), Type Zero Improvements

(TZs), Ohio Class Modifications (OCMODs), Software Updates (SUs), Temporary Engineering Changes (TECs), etc., and as a precursor to performing installations. Upon completion of a Shipcheck, a completed Shipcheck Report (CDRL A003) shall be provided to the cognizant SSC IMO. The contractor shall conduct and document site surveys of shore installation sites in accordance with the requirements in the SPAWAR Shore Installation Process Handbook.

4.2.2 Electromagnetic Environmental Effects (Ship and Shore)

The contractor shall be familiar with the standards and principles governing Electromagnetic Environmental Effects (E3). When preparing planning documentation for the installation of radio frequency transmitters under this contract, the contractors shall include any requirement for an E3 study or related documentation (e.g., Site Approval for Shore Installations) in the appropriate locations within the planning documentation.

4.2.3 Design Shipchecks

The contractor shall perform and participate in design shipchecks of prescribed ships and submarines, to determine or assist in determining the optimum location and configuration for an equipment/system installation including any platform preparation requirements. The contractor shall gather pertinent environmental, engineering, configuration, and design information relevant to site conditions and the system/equipment/software to be installed, analyze the collected data, and perform necessary calculations to make technical recommendations, and preparing technical reports (CDRL A003) and documentation (CDRL A003) (such as Shipcheck reports) for a specific installation. When the contractor is tasked to perform the design shipcheck, the contractor shall provide the shipcheck report to the Government AIT manager within six working days after the design shipcheck is completed. Design shipcheck responsibilities shall be performed in accordance with NAVSEA TS9090-310E.

4.2.3.1 Platform Preparation Requirements

When afloat platform preparation work is required that is beyond the capacity of the contractor to perform for any reason, the contractor may be tasked to prepare specifications that describe in detail the work that must be performed. These specifications shall include the standards that the work must meet and appropriate testing and inspection requirements. When appropriate, specifications for this type of work shall be prepared by licensed professional engineers operating in their field of expertise. See CDRL A020 for further guidance.

4.2.4 Shore Design Documentation

The contractor shall provide shore installation design documentation, as tasked, that meets the requirements of the current version of the Shore Installation Process Handbook (SIPH) or the SPAWAR Installation Requirements Drawings Standard, whichever is applicable. Installation Design Documentation includes:

a. Base Electronic System Engineering Plans (BESEPs). BESEPs (CDRL A009) shall be developed using the guidance in the SIPH. Contractor provided BESEPs shall be submitted to SPAWAR for review and approval prior to distribution

outside of SPAWAR. Message BESEPs shall be based on the message format provided in the SIPH.

b. Training System Installation Plans (TSIPs). TSIPs (CDRL A009) shall be developed using the guidance in the SIPH. The SIPH provides guidance for implementing the requirements of the governing OPNAV Instruction (OPNAVINST 11102.2).

c. Standard (Shore) Installation Details. The contractor may be tasked to develop standard detail drawings governing tasks that are repeated on many different installations. The guidance in these drawings shall comply with the requirements in MIL-STD-188-124B and the guidance provided in MIL-HDBK-419A and TIA-942. Once these drawings are approved and promulgated, they shall be used to provide details for all IRDs and IDPs developed under this contract. (CDRL A005)

d. Installation Requirements Drawings (IRDs). IRDs shall be developed in accordance with the guidance contained in the SPAWAR IRD Standard. (See SPAWARINST 4720.5.) Standard (Shore) Installation Details should be used as a source of information whenever possible to reduce drawing development cost and increase standardization. Whenever a Government approved Standard (Shore) Installation Detail is provided that applies to the system covered by the IRD, the content of the Government approved Standard (Shore) Installation Detail shall be utilized to the maximum practical extent during the development of the IRD. (CDRL A005)

e. Specifications for Shore Site Preparations (CDRL A020). When site preparation work is required that is beyond the capacity of the contractor to perform for any reason (e.g., foreign government restrictions on whom can perform the work, lack of equipment or expertise), the contractor may be tasked to prepare specifications that describe in detail the work that must be performed. These specifications shall include the standards that the work must meet and appropriate testing and inspection requirements. When appropriate, specifications for this type of work shall be prepared by licensed professional engineers operating in their field of expertise. See CDRL A020 for further guidance.

f. Installation Design Plans (IDPs). IDPs shall be developed in accordance with the guidance contained in the SIPH. Drawing development shall follow the guidance provided in the IDEA standard (an SIPH appendix) regarding the use of model space and paper space (layout space). Whenever a Government approved Standard (Shore) Installation Details Drawings is provided that applies to a system being installed, the content of the drawing shall also be utilized to the maximum practical extent during the development of the IDP to cover details not addressed in the IRD. Whenever a Government approved Installation Requirements Drawing (IRD) is provided or made available by the Government that applies to a system being installed, the content of the IRD shall be utilized to the maximum practical extent during the development of the IDP. IDPs that require the construction of antenna platforms or the mounting of antennas weighing more than fifty pounds shall have separate drawings detailing the construction and mounting requirements that are signed by a licensed professional structural engineer and that state the maximum winds that the installation is

designed to withstand. This may also be required for smaller antennas. (CDRL A005)

g. IDP Quality Assurance Checklists (CDRL A011). The contractor shall implement a rigorous approval process to certify that IDPs and IRDs are technically accurate, compliant with design and installation standards, and conform to standardized drawing format requirements. The contractor shall provide a completed IDP Quality Assurance Checklist for each drawing developed under this contract that shows the name of the individual responsible for checking each drawing for compliance with the SIPH, each requirement that was checked, and the results of that check. The checklist shall be thorough enough to ensure compliance with the governing standards. The checklist to be completed for IDPs shall be based on the standard IDP checklists provided by the Government.

4.2.5 Afloat Design Documentation

The contractor shall provide afloat installation design documentation, as tasked, that meets the applicable requirements of the IRD Standard and the afloat standards listed in Table 4. This Installation Design Documentation includes:

a. Draft Memorandums of Agreement (MOAs) (CDRL A009) shall be developed using the guidance for Memorandums of Agreement provided in NAVSEA Technical Specification TS9090-310E
b. Installation Requirements Drawings (IRDs). IRDs shall be developed in accordance with the guidance contained in the SPAWAR IRD Standard. (See SPAWARINST 4720.5.) (CDRL A005)
c. Ship Change Documents (SCDs)/SHIPALT Design Requirements/Ship Alteration Records (SARs) (CDRL A003)
d. Ship Alteration Installation Drawings (SIDs) shall represent a design based on criteria presented in the approved SAR for the SHIPALT, design guidance provided by the Planning Yard (PY), the actual configuration determined during a design shipcheck of the applicable ship, NAVSEA 0902-018-2010 (Series), NAVSEA S9AAO-AB-GOS-010/GSO (Series) or other general specification as applicable. When an approved IRD or ICD is available, it shall be used to form the basis of the SID. SIDs shall meet the requirements in the latest version of NAVSEA Technical Specification No.: TS9090-600 (currently TS9090-600A). In addition, drawings shall be provided in the form of AutoCAD 2007 compatible files that have been prepared in accordance with Revision B of the *IDEA CAD STANDARDS* used by the planning yards. (CDRL A005)
e. SHIPALT Completion Reports (CDRL A003)
f. Departures from Specifications (DFSs) (CDRL A003)
g. Liaison Action Records (LARs) (CDRL A003)
h. Other documents as tasked

4.2.6 Test Plans and Documentation

The contractor shall develop and provide platform specific (shore site, ship, submarine, mobile van, etc.) Systems Operation and Verification Test (SOVT) documentation including plans (CDRL A012) and completed documents showing results (CDRL A013).

All SOVT documentation shall be prepared in accordance with the guidance in the current SPAWAR System Operational Verification and Test (SOVT) Preparation and Execution Guide (SPEG) for Ship, Shore, and Submarine Installations.

4.2.7 Installation Acquisition Support

When the contractor is tasked to perform an installation in accordance with an approved installation design plan (IDP), Ship Installation Document (SID), or equivalent document, the contractor shall furnish all installation material identified as contractor furnished material. Installation material or equipment that is not identified on the approved installation drawings shall not be provided without adding the required material to the appropriate parts lists on the red-lined copy of the installation drawings (IDPs or SIDs) used to produce as-builts and obtaining prior approval from the Ordering Officer. In accordance with individual task orders, the contractor may be required to purchase major system components, sub-systems, systems and support systems, such as HVAC units. The contractor will be required to provide a detailed list or estimate of materials in task order proposals that will be finalized and a ceiling price for materials will be established at the time a task order is placed. All items purchased by the contractor to directly support the task are known as contractor-acquired property.

4.2.8 Fabrication Support

The Contractor shall fabricate foundations, antenna platforms and towers, rack adapters, switching units, relay panels, patch panels, test sets, equipment stands, lockers, mounting brackets, switch assemblies, junction boxes, nameplates, cable tags, wire markers, cable hangers, wiring harnesses, fiber optic cable assemblies, and other miscellaneous items required to complete installations. As applicable, all fabricated items shall meet criteria for installation on ships, submarines or shore stations and be capable of passing through the required ships, submarines or shore access hatches and or doors. Fabricated items must meet industry standards of workmanship. Due to the quick reaction time frequently required, the contractor shall have the ability to initiate fabrication of items within 24 hours of issue of a task order. The contractor shall also assemble alteration and installation kits as specified in the individual task orders.

4.2.9 Equipment and Material Staging and Transportation

The contractor shall provide equipment/material staging areas, which includes Government Furnished Equipment/Material (GFE/GFM) and contractor acquired Equipment/Material, as required to support work under this contract. The contractor staging area shall comply with all facility requirements as outlined in SOW Paragraph 5.0. The contractor shall provide all equipment and/or material transportation to and from the installation sites including transportation of Government-Furnished Property. Prior to shipment, all items shall be packaged in such a manner to assure safe delivery on site. The contractor shall develop and maintain inventory control records of all equipment/material transported and develop logistics status reports, which are parts of the monthly contract status report (CDRL A023) as specified in this SOW or by individual task orders.

4.2.9.1 Packaging

Assets shall be packaged in accordance with MIL-STD-2073 or best commercial practices. MIL-STD-129 requirements apply for marking of packages/containers.

4.3 Installation Support

As tasked within individual task orders, the contractor shall provide the technical support services necessary to accomplish or support an assigned installation in accordance with a Government approved design package. Installations at shore sites shall be in accordance with the standards and policies discussed in SPAWAR Shore Installation Process Handbook Appendix AC. Installations on afloat platforms shall be in accordance with this SOW, current AIT guidance/specifications from NAVSEA, applicable NAVSEA Standard Items, and requirements stated on task orders. These installation planning, execution (physically installing equipment, cables, etc.), removal, procurement, fabrication and/or maintenance, minor overhaul and repair services shall be provided in support of projects under the SPAWAR's cognizance at designated sites worldwide. Details of specific installation support tasks will be included in individual task orders.

4.3.1 Installation Support and Execution Tasks

As designated in individual task orders, the contractor shall install new or overhauled systems, equipment upgrades, and field change kits at shore facilities and on surface ships, submarines, special purpose crafts and other vehicles located worldwide. The contractor may be responsible for the full range of installation support services including crane service, rigging services, welding, foundation fabrication, cable installation, connector assembly, equipment mounting, and equipment alignment. The contractor may also be required to install or modify the following in support of equipment installations: passive countermeasures system (PCMS) material, power, grounding; ducting for ventilation, power and signal; cabinets/racks on foundations; deck covering, sheet metal, insulation, vault doors, safes; multi-conductor and/or coaxial cables; distribution frames and signal cross connects; and/or HVAC, water and dry air systems. Other services may include the fabrication or machining of various items (shafts, cylinders, rings, housings, nuts, bolts, screws, bushings, couplings, gears, shaft threading, retainers, gear boxes, chase all type threads, mounting plates, brackets, platforms, etc.) required for the repair, alteration and conversion of ships or in support of shore installations. The contractor shall continue to develop and maintain inventory control records of all equipment/material available or needed during the completion of installation support and execution tasks. This will typically be a continuation of the efforts previously discussed in Section 4.2.9 of this SOW, and this data shall also be included in the monthly contract status report (CDRL A023). Tasks may include, but not be limited to the following onboard ships, submarines, and at shore stations:

a. Pre-Installation Checkout (PICO) to verify operational condition of existing equipment prior to modifications
b. Installation/removal/modification of electronic equipment/systems/software
c. Installation/removal/modification of local area networks (LANs), wide area networks (WANs) and Fiber Optic cable and networks. This may include the installation of outside plant cable to connect buildings at shore locations.
d. Installation/removal/modification of antenna and RF distribution systems

e. Installation/removal/modification of inside plant and outside plant cable pathways above and below ground
f. Test and checkout of electronic/electrical equipment/systems
g. Modification, overhaul or minor repair to designated electrical/electronic equipment/systems
h. Fabrication of switching units, relay panels, patch panels, test sets, equipment stands, etc., used with electronic/electrical equipment/systems
i. Fabrication/modification of foundations, antenna platforms/towers, enclosures, equipment racks, shelves, and miscellaneous metal structures in accordance with applicable shock and environmental requirements
j. Precision optical alignment required for inertial navigation system installations

4.3.2 SUBSAFE Work

If specified in individual task orders, the contractor may be required to subcontract for SUBSAFE work with an activity authorized per NAVSEA Notice 5000.

4.3.3 Afloat/Shipyard Confined Space Testing

When confined space entry is required to perform a task, the contractor shall provide a Marine Chemist or certified Industrial Hygienist to test and certify confined spaces that cannot be ventilated to within Permissible Exposure Limits (PELs) or are immediately dangerous to life or Health, as required by OSHA regulation 29 CFR 1915.12(c)(3). (Under provisions of 29 CFR 1960.17, OSHA authorizes the Navy to use a Navy-certified Gas Free Engineer in lieu of a certified Marine chemist. Gas Free Engineers are certified in accordance with SECNAVINST 5100.16B, *Navy Gas Free Engineer Certification/Recertification Process*.)

4.3.4 Afloat/Shipyard "Safe for Hot Work" Testing

When required to perform a task in accordance with the OSHA regulations at 29 CFR 1915.14(a)(1), the contractor shall to provide a Marine Chemist for "Safe for Hot Work" testing and certification.

4.3.5 Shore Confined Space Work

The contractors shall provide their own competent personnel and equipment to test the confined spaces they work in. The contractor shall provide all items needed to maintain a safe working environment while work is being performed in confined spaces as required by the US Army Corps of Engineers EM 385-1-1, Section 34.

4.4 Installation Testing and Logistic Support

As tasked within individual task orders, the contractor shall provide installation testing and logistic support documentation and services as described in this section of the SOW.

4.4.1 Installation Pre-SOVT Inspection and Testing

All work shall be in accordance with applicable ship, submarine or shore station procedures and installation standards specified in this SOW. Cables shall be cold-checked after assembly for point-to-point continuity and adequate insulation resistance.

Additional pre-light-off testing may be designated in individual orders depending on specialized signal/cable type requirements. Someone technically qualified, other than the assembler, shall perform these cold checks. For each Task Order and Task Order Sub-Task with a separate Government ID number the contractor shall maintain a Microsoft Excel compatible spreadsheet (A013) that is available for examination at the work site and that clearly identifies for each cable end installed under the task or sub-task:

a. The individual or individuals who terminated it
b. The cable number and cable end termination point location
c. The individual or individuals who inspected the completed work
d. Any defects that were found and not corrected
e. Any test results (e.g., optical loss readings, successful Cat 6 cable tester check, etc.) (Contractors may identify and reference a separately provided report containing the test results instead of providing results in the spreadsheet.)

4.4.2 System Operational Verification Testing

The contractor shall, as specified by individual task orders, support SSC personnel in conducting a System Operational Verification Test (SOVT) on designated systems utilizing Government approved test plans and procedures. This process will include an inspection of the system installation for discrepancies. All discrepancies shall be documented as required by the SPEG and included in the completed SOVT document. The contractor shall perform system checkout/System Operational Verification Tests in accordance with the Government approved SOVT document for the installation. The contractor shall correct all installation related deficiencies discovered during the SOVT. Major discrepancies/deficiencies that will adversely impact task completion schedule shall be immediately reported to the On-Site Government Representative or Project Engineer and other specified Government personnel designated in individual task orders. The contractor shall provide an operational system to be certified by the designated Government point of contact, quality inspector and the receiving activity.

4.4.3 Training Support

The contractor shall conduct on-the-job training (OJT) on specific equipment/systems as designated by task order upon completion of installation. The contractor shall record the names and point of contact information for all individual receiving training, the training dates, and training locations on the training records to be submitted to the SHIPSUP, shore On-Site Government Representative (OSGR), or shore Project Engineer (PE) prior to leaving the afloat platform or installation site.

4.4.4 Shore Installation Logistic Support Documentation

The Installation Logistic Support Documentation shall be provided to the On-Site Government Representative or Project Engineer before the contractor leaves the installation site with the exception of final (finished) as-built drawings.

4.4.4.1 CDMD-OA Data Support

The contractor shall collect configuration data needed to validate CDMD-OA documentation and provide corrected copies of the documentation to the On-Site

Government Representative or Project Engineer prior to leaving the installation site. (CDRL A006)

4.4.4.2 As-Built Drawings

Whenever the contractor is tasked to execute an installation on site, the contractor shall create at least three "red-lined" copies of the IDP showing all differences between IDP and the actual installation performed by the contractor. Two red-lined copies shall be turned over to the On-Site Government Representative (OSGR) or Project Engineer (PE) at the site, and one shall be retained by the contractor for the purpose of creating the finished as-built drawings. If the installation is a modification to an existing system, the finished as-built drawing shall be a modification to the drawing that covers the previously installed system, not just an update to the IDP. If there is no drawing that covers the entire previously installed system, the contractor may be tasked to develop this drawing by combining several drawings and reverse engineering as required. As-built drawing numbering shall be in accordance with Appendix Q of the shore installation process handbook (SIPH). Finished As-Built Drawings (CDRL A005) shall be provided to the Government in both AutoCAD and Adobe Acrobat formats.

4.4.4.3 Installation Completion Report

The contractor shall provide a soft copy of the Installation Completion Report (ICR) (CDRL A003) for the installation to the OSGR or PE prior to leaving the installation site. The contents of the report shall be developed following the guidance in the SIPH. When appropriate, a separate form shall be provided to account for previously existing site assets that were used to support the installation. The contractor prepared ICR shall provide inventories of the following:

a. Spare parts provided to support the installed equipment
b. Documentation to be turned over to the installation site
c. Special purpose support and test equipment provided to support the installed equipment.
d. Software licenses. Information showing where the licenses were installed shall be provided when different computers are installed with different licenses. The inventory list shall clearly distinguish between operational software, management software, and diagnostic software.
e. Software Configuration CD-ROMs
f. Firmware Configuration Setting CD-ROMs
g. Maintenance Documentation
h. Training and Training Documentation
i. Warranties

4.4.4.4 Software Configuration Files

Whenever the contractor is responsible for the software configuration of any pieces of equipment being installed, the contractor shall provide files containing software configuration information for each piece that is sufficient to restore the system to operation if any pieces of hardware need to be replaced. These files (CDRL A016) shall include those containing the state of installed servers, (The server system state includes the registry, the COM+ Class Registration Database, and boot files.), clients, switches,

virtual private network (VPN) devices, routers, firewalls, and intrusion detection systems. The files containing the configuration data shall be burned onto four identical encrypted CD-ROMs. Two CD-ROMs shall be provided to the receiving activity, and two shall be provided to the On Site Government Representative or Project Engineer.

4.4.4.5 Firmware Configuration Settings

All BIOS and other similar settings embedded in permanent or semi-permanent programmable ROMs by the contractor shall be documented with text files (.txt extension) (CDRL A016) showing the firmware version and the settings in use. The files containing the configuration data shall be burned onto four identical encrypted CD-ROMs. Two CD-ROMs shall be provided to the receiving activity, and two shall be provided to the On Site Government Representative or Project Engineer.

4.4.5 Afloat Installation Logistic Support Documentation

The Installation Logistic Support Documentation shall be provided to the Government before the contractor leaves the installation platform with the exception of final (finished) as-built drawings.

The contactor shall attend meetings and prepare reports to accomplish the reporting of alterations in accordance with NAVSEA Standard Item 009-102.

Additionally, the contractor shall prepare as-built plans/drawings (CDRL A005) or recommended changes as specified in individual task orders. At the conclusion of each installation, if not otherwise specified, the contractor shall furnish two copies of as-built (or modification/red-lined) plans/drawings: one set to the ship or submarine upon task completion, and one set to the designated SSC technical representative within fifteen (15) calendar days after completion of equipment installation. The red-lined plans or drawings shall include, as a minimum, the following items:

a. Changes in the equipment layout and foundations
b. Changes in duct and conduit systems
c. Changes in the cabling and wiring diagram (including AC Power distribution)
d. Updated material list that reflect actual type and quantities of material used
e. Changes in system signal flow diagrams and equipment configuration set-up

After review and approval of the red-lined set delivered to the Government and if authorized by the cognizant design activity, the contractor shall change the original drawings to reflect the change dictated by the red-lined drawings.

4.5 Technical Assistance

The contractor shall provide technical assistance directly to ships, submarines or shore stations for CASREP resolution, fault analysis, testing, and/or repair of various installed systems and equipment, as directed by individual task orders, to restore the units to operational status. The contractor personnel providing technical assistance shall be prepared to travel for onsite assistance within 24 hours of notification. These personnel shall be technically knowledgeable and capable of analyzing system problems and implementing corrective actions without direct assistance or support from SPAWAR or

SSC personnel if and when required. To the extent specified in the task order, the contractor shall be responsible for the minor repair of modules/subassemblies removed or returned from the ships, submarines or shore stations. The contractor shall submit a failure and corrective action report (CDRL A003) after performing each repair task. Technical assistance may also involve collecting additional information for the SSCs, such as design, operation and equipment conditions, training and skill levels of site operators, engineering change status, initial calibration, re-calibration and maintenance problems. The contractor shall submit findings, analysis results, and corrective actions associated with technical assistance provided. The contractor shall notify the Contracting Officer immediately should it become come aware that it has been tasked or solicited to conduct engineering and technical support that presents an organizational conflict of interest or potential conflict of interest that could result in a violation of H-302, the Organizational Conflicts of Interest (OCI) clause of this contract.

4.5.1 Fault Isolation and Repair

The contractor shall perform fault isolation and repair on equipment/systems as specified by individual task orders. Faults discovered, and corrective action taken shall be documented and conveyed to the COR. If the unit is not repairable or if such repair is outside the scope of the assignment, the Contractor must immediately notify the designated SPAWAR point of contact or In-Service Engineering Agent (ISEA) and obtain proper instructions for reporting and/or returning the item.

4.5.1.1 Fault Isolation and Repair Expenditures

When the contractor is tasked to perform a fault-isolation and repair or a repair action, the contractor is authorized to expend the amount specifically identified in the task order for the purpose of obtaining parts and material necessary to accomplish the fault isolation and repair.

4.6 Special Fabrication Tasks

The contractor may be tasked to design and/or fabricate items required to adapt various C4ISR systems to a variety of installation platforms without being tasked to install the item being fabricated. When design materials are chosen by the contractor, all such items shall be designed to withstand the installation environment identified on the task order for the amount of time specified in the task order. If not specified in the task order, the design life shall be at least fifteen years with minimal maintenance. Items destined for burial shall be designed to withstand the environment for at least thirty years. Examples of items that the contractor could be tasked to fabricate are antenna mounts (e.g., for testing and evaluation), pier and other mobile platform connection boxes, and custom switches. All contractor designed fabricated items shall be provided with sufficient manufacturing engineering documentation to enable the item to be duplicated by any competent manufacturer. Fabricated items shall be free of burrs and rough or sharp edges.

4.7 Excess Material/Equipment Disposition Support

Upon completion of individual task orders, the contractor shall remove all excess material/equipment from the work site, and stage the items in contractor furnished

warehouse facilities. Unless prior arrangements are made via the task order, the contractor shall submit a disposition inventory list (CDRL A006) outlining Government property/material along with a request form for Plant Clearance action to the cognizant Defense Contract Management Agency (DCMA) and COR within 15 days after completion of each task. After right of first refusal is received from the COR, the contractor shall coordinate with the DCMA Plant Clearance Officer for the disposition of excess material and equipment. Hazardous Material storage and disposal shall conform to federal, state, and local regulations and the requirements of this Statement of Work. The contractor shall also comply with any additional Hazardous Materials requirements of host activities such as Government/Private shipyards, military bases, foreign countries, etc.

4.8 Quality

The following requirements for contractor maintenance of a quality assurance and control (inspection) system are incorporated in this contract.

4.8.1 Quality Management System

The contractor shall provide and maintain a quality management system that meets NAVSEA Standard Item 009-04 and ANSI/ISO/ASQ Q9001-2008: *Quality Management Systems Requirements Standard*. The quality management system (QMS) shall be accredited by an ANSI-ASQ National Accreditation Board (ANAB) accredited certification body (CB). The contractor must possess an accreditation certificate of conformance to ISO 9001:2008. In addition, contractors performing installation work on afloat platforms (ships and submarines) shall have a QMS/plan accepted by NAVSEA 04 (that complies with NAVSEA TS9090-310E Appendix D) prior to installation. The quality system shall be documented and contain procedures, planning, and all other documentation and data necessary to provide an efficient and effective quality system. The quality system shall be made available to the Government for review at both a program and worksite services level during predetermined visits. Existing quality documents that meet the requirements of this contract may continue to be used. The contractor shall also require all subcontractors to possess a quality assurance and control program commensurate with the services and supplies to be provided as determined by the contractor's internal audit system. The Government reserves the right to disapprove the contractor's and/or subcontractor's quality system or portions thereof when the quality system(s) fails to meet contractual requirements at either the program or worksite services level.

4.8.2 Quality System Compliance

The quality of all services referred under this contract shall conform to the highest standards in the relevant profession, trade, or field of endeavor. Upon award, the contractor must have in place, an existing Government approved quality system by NAVSEA 04XQ or SUPSHIP for shipboard and submarine work in accordance with NAVSEA Technical Specification 9090-310E. Within 30 days of award, the contractor shall submit their Quality Program documentation relevant to shore installation to the COR for review and approval of their quality system for shore facility installations. The documented quality management system shall be used to ensure that the end product of

each task conforms to contract requirements whether produced by the contractor or provided by approved subcontractors or vendors. The quality management system shall provide for control over all phases of the various types of tasks, from initial manning and material ordering to completion of final tasking, before offering the completed tasks to the government for acceptance as specified in this contract or in task orders. All services shall be rendered according to the documented quality system and directly supervised by individuals qualified in the relevant profession or trade. Methods and materials for common repeated processes shall be examined to ensure that they comply with applicable standards and are fully documented. These processes shall be standardized when possible to reduce installation design costs, improve quality system compliance, and reduce parts inventory complexity.

4.8.3 Quality Control

Unless otherwise directed, the contractor is responsible for all quality control inspections necessary in the performance of the various tasks as assigned and identified by the respective Work Breakdown Structure (WBS), Plan of Action and Milestones (POA&M), or procedural quality system document. The Government reserves the right to perform any inspections deemed necessary to assure that the contractor provided services, documents, and material meet the prescribed requirements and to reject any or all services, documents, and material in a category when nonconformance is established.

4.8.4 Quality Assurance Records

Quality assurance records shall be maintained for the duration of the contact and not destroyed. This includes all test and inspection records. Original test and inspection results, including written SOVT Test results recorded by the contractor (CRDL A013), shall be legible and in indelible ink. Erasures, write-overs, white-outs, ditto marks, continuation arrows, signature stamps, etc., are not acceptable on quality assurance, test and inspection records. Record and Certification signatures and initials shall be in indelible ink. Each signature and initial shall be accompanied by the legible name of the person represented printed by that person in indelible ink. The contractor shall correct errors in record keeping by drawing a single line through the error, recording the correct entry, initialing, dating, and printing the name of the person making the correction.

4.8.4.1 Quality Assurance Documentation Availability

The contractor's current Quality Manual and statements of quality policy and quality objectives shall be provided to the Government (CDRL A019). Copies of Quality requested quality assurance records shall be provided to the Government as required to support investigations of quality problems and as required to support semi-annual Quality Assurance audits. Original documentation shall be available for examination within one hour of the arrival of a Government representative at the location where the records are held. Copies shall be provided within two work days of receipt of notification that the records are required for investigations. Copies of Quality Assurance documentation requested to support semi-annual Quality Assurance Audits shall be provided within seven days of request for the records. Quality Assurance Documentation includes, but is not limited to:

a. All test and inspection records and procedures (CDRL A013)

b. Qualification records of electricians, welders, and other specialized trades and professions (CDRL A011)
c. All test and measuring equipment calibration records (CDRL A011)

4.8.4.2 Support of Quality Assurance Audits

The contractor shall provide interior work space at the contractor's main facility to support up to four auditors for up to five full work days during scheduled Quality Assurance Audits. The work space shall provide a quiet, clean, and comfortable working environment with lighting, seating, ventilation, heating, air-conditioning, and access to toilet facilities that is substantially equal to that provided to senior management personnel working at the facility. The work space shall include a minimum of six square feet of usable open desk or conference room table space per auditor, adequate electrical power for four laptop computers, a telephone line, and chairs similar to those used by office workers at the facility. Auditors shall be also provided with four parking spaces that are within 300 feet of the main facility. Auditors shall be provided with the maximum possible access to the facility and its records during the audit period. This includes full access to the library or other locations where installation standards are held, full access to the locations where tools and test equipment are held, full access to painting and other shop locations, and full access to storage locations during the audit period. The Government will limit the amount of time spent in active work areas to the minimum amount of time needed for auditors to verify that the requirements of the SOW are being complied with. The Government will work with the contractor to avoid unnecessarily disrupting ongoing operations during the audit period. The Government will provide an audit schedule at least two weeks prior to each event.

4.8.5 Formal Corrective Action Responses and Root Cause Analysis

When the contracting officer notifies the contractor that a systemic or major quality assurance problem requires corrective action, the contractor shall prepare a formal response that addresses the problem and its root causes (CDRL A011). The contractor's response shall be delivered to the contracting officer within ten work days, shall provide root cause analysis information, and shall identify any preventive or corrective actions to be implemented by the contractor - with implementation schedule dates.

4.8.6 Contractor Quality Assurance Workbook

For ship and submarine installations, the contractor shall develop a Quality Assurance Workbook (CDRL A011) in accordance with the requirements of NAVSEA TS9090-310E.

4.9 Safety

The contractor is solely responsible for compliance with the Occupational Safety and Health Act (OSHA) (Public Law 91-596) and the resulting standards, OSHA Standard 29 CFR 1910 (general), 1915 (shipboard/submarine) and 1926 (shore), and for the protection, safety and health of their employees and any subcontractors assigned to the respective task orders under this contract. Contractor personnel working on shore installations shall be familiar with and shall follow all applicable safety guidance, including documentation requirements, in Appendix AC of the SIPH, and submit safety

documentation (CDRL A014) as required. Contractor personnel working on afloat installations shall be familiar with and shall follow all applicable safety guidance, including documentation (CDRL A014) submittal requirements, in the applicable NAVSEA Standard Items.

4.9.1 Accident Notification

For incidents involving performance under this contract, the contractor shall immediately verbally report any accidents (including fires) involving Government or contractor personnel injuries needing medical treatment or property/equipment damage affecting safety or operations to the IMO, contracting officer (PCO), and COR. All property damage and accidents shall be immediately reported to the cognizant Project Engineer, SHIPSUP, or On-Site Government Representative. Additionally, the Contractor is responsible for securing the scene and impounding evidence/wreckage until released by the contracting officer. It will be the cognizant Project Engineer, SHIPSUP, or On-Site Government Representative's responsibility to notify the cognizant Safety Office. In addition to the verbal notification, the contractor shall submit via digitally signed and encrypted e-mail one legible copy of a formal written report (CDRL A014) to the PCO and COR within 24 hours of each accident involving medical treatment, fire, or property/equipment damage that affects safety or operations or that the contractor will not repair within five days. The written report shall contain the name and ID number of each injured person, date and time of accident/fire, extent of each personal injury or property damage, contractor/subcontractor name, task order number, type of accident/fire, location of event (e.g., for ships: ship name and hull number, space, compartment and for shore sites: Base Name, Base Location, Command Occupying Building, Building Number, and Room Number) , and a brief description of the event including occurrences leading up to the accident/fire.[1] The contractor shall ensure that all privacy act data (e.g., names and employee ID numbers) within these reports are accorded appropriate protection.

4.9.2 Shore Facilities Electrical Safety

The contractor shall comply with the energy control (lockout/tagout) and other applicable safety requirements contained in UFC 3-560-01, *Electrical Safety, O & M.* The contractor shall also comply with SPAWARINST 5100.9D, *Navy Shore Electronics Safety Precautions for Navy Electronics Personnel/Operations*.

4.9.2.1 Safe Building Wiring Practices

The contractor shall utilize wirenuts to securely cap and insulate the ends of exposed electrical wires left unattended, when the wire is #6 AWG or smaller, making sure that no bare wire is exposed below the protective insulated cap of the wirenut. Several turns of electrical tape shall be used to insulate the ends of larger exposed electrical wires left unattended. Bushings shall be used to cover the cut ends of flexible conduit prior to inserting wire or cable through the flexible conduit, and these bushings shall remain in place to protect the wires or cable while it is unattended. Non-flexible conduit ends shall be reamed to eliminate burrs and sharp edges that could damage wires and cables. All

[1] See NAVSEA Standard Item 009-01, Section 3.17.1

metallic conduit runs shall be terminated with a smooth insulated bushing to protect electrical wires and cables during installation. All building wiring shall meet the requirements of the most recent National Electrical Code available on the date of the Task Order. Wiring at Department of Defense Communications-Electronics facilities shall also meet the more stringent grounding requirements of MlL-STD-l 88-1 24B and its change notices. All unterminated electrical wiring that is unattended (e.g., left overnight after installers have gone home) shall be clearly labeled at each end to indicate points of origin and termination (e.g., Power Panel and Circuit Breaker Identification).

4.9.2.2 Energized Work

The contractor shall not perform any work on energized electrical circuits without being in possession of an Energized Work Permit, signed by the authority having jurisdiction, whenever such a permit is required by NFPA 70E. The contractor shall provide the information needed to obtain the permit (CDRL A014) to the Authority Having Jurisdiction (AHJ) and the SPAWAR Project Engineer. A copy of the permit shall be posted as close as practical to the location or locations of the energized work. All such energized work at US Navy Facilities shall require written, job specific procedures approved, in writing, by the Commanding Officer/Executive Officer and considered necessary to support a critical mission, prevent human injury, or protect property.[2] (See UFC 3-560-01 for corresponding Air Force requirements.) In all instances of work on energized electrical circuits, workers shall be qualified for energized line work and all required protective equipment and special tools shall be available at the work site and used as required during the performance of the work.

4.9.2.3 Lockout and Tagout Procedures

Energized work shall be avoided except "when required to support a critical mission, prevent human injury, or protect property.[3]" When energized work is not necessary, prior to working on any electrical power circuit, the contractor shall follow the steps for placing a circuit in an Electrically Safe Work Condition contained in UFC 3-560-01. This process shall be fully coordinated with the SPAWAR Project Engineer prior to initiation. The contractor shall apply the lockout/tagout program **with temporary grounding** to ensure that an appropriate ground potential is maintained as required by UFC 3-560-01. The contractor shall provide any data needed to obtain a safe clearance form for locking out or tagging out circuits in accordance with the requirements of UFC 3-560-01. The contractor shall provide the information needed to obtain the safe clearance (CDRL A014) to the Authority Having Jurisdiction (AHJ) and the SPAWAR Project Engineer.

4.9.3 Afloat Electrical Safety

While working on ships, submarines, and other afloat platforms, the contractor shall follow the techniques in MIL-STD-1310G, *Shipboard Bonding and Grounding, and other Techniques for Electromagnetic Compatibility and Safety*. Contractors shall also follow the General Safety Precautions and Policies in NAVSEA SE000-00-EIM-100.

[2] UFC 3-560-01, December 06, 2006 (with change 3) Section 1-5.1.1
[3] UFC 3-560-01, December 06, 2006 (with change 3), Section 8-1

The contractor shall provide training to ensure that all personnel performing afloat installations are familiar with the electrical safety precautions contained in NAVSEA 0900-LP-007-9010, *Electric Shock, Its Causes and Its Prevention.*

4.9.3.1 Compliance with Ship Authorization, Control, Isolation, Blanking, and Tagging Requirements

The contractor comply with the requirements of NAVSEA Standard Item 009-24, *Authorization, Control, Isolation, Blanking, and Tagging Requirements; accomplish*. The contractor shall tape and insulate cable ends disconnected from equipment to prevent shorting out or grounding in the event a system is accidentally energized. The contractor shall tag each electrical cable indicating circuit number and location of circuit breaker panel or fuse box that supplies the cable. Individuals who perform shipboard work shall be indoctrinated in the basic purpose, use, and restrictions of S0400-AD-URM-010/TUM, Tag-Out Users Manual."

4.10 Clean-up

Unless otherwise stated in the task order, the contractor shall be responsible, while performing tasks under this contract, for maintaining all work areas in a neat and orderly manner and for properly removing and disposing of all wastes daily. Waste material includes discarded packaging materials, cable scraps, removed sealants, and all other debris resulting from the installation. Due caution shall be exercised at all times and preventive measures employed to prevent dust, waste materials, or other contaminants from entering or damaging existing or new equipment. Upon completion of all work, the work area shall be left in a neat condition. Interior working areas shall be vacuumed daily and wireways cleaned of all debris upon completion of the contractor's work.

4.10.1 Abandoned Cable

Unless otherwise stated in the task order, the contractor shall be responsible, while performing tasks under this contract, for removing any cabling or wiring that is no longer connected to equipment or outlets (electrical, data, or phone) as a result of removing equipment or outlets under the task order. Failure to remove abandoned cable at shore installations is a violation of the National Electrical Code that affects safety.

4.10.2 Glass Fiber Scraps

The contractor shall not drop fiber scraps on the floor (where they will stick in carpets or shoes and be carried elsewhere). If for any reason the contractor has accidently dropped fiber scraps on the floor, the contractor shall clean up the scraps immediately.

4.10.3 Firestop Repair

Unless otherwise stated in the task order, the contractor shall be responsible, while performing tasks under this contract, for repairing any damage to firestops caused by removing cables or performing other tasks under the task order.

4.10.4 Displaced Equipment and Blank Panels

Instructions for the disposal of displaced equipment and blank panels should be provided in the task order. Otherwise, all displaced equipment shall be removed to a secure

location within five kilometers of the installation site, identified by the On-Site Government Representative, Project Engineer, or SHIPSUP.

4.11 Data Security and Information Assurance

As a minimum, the contractor shall handle all data received or generated under this contract as For Official Use Only (FOUO) material. Any FOUO or classified information received or generated shall be handled in accordance with the attached DD Form 254. The contractor shall screen all electronic deliverables or electronically delivered information for malicious code using the latest commercially available anti-virus software prior to delivery to the Government. The Contractor shall also utilize appropriate safeguards (firewalls, password protection, encryption, security certificates, etc) at all times to protect contract related information when stored on the contractor's computers/servers and especially when providing access or transmission via the Internet.

4.11.1 Security Readiness Review Requirement

The contractor shall not connect PC or Server computers to Navy networks prior to the installation of all required anti-virus software and security patches and, when applicable, the performance of a Security Readiness Review of the system. See http://iase.disa.mil/stigs/SRR/index.html and http://iase.disa.mil/stigs/index.html for SRR information.

4.11.2 National Information Assurance Partnership (NIAP) Requirement

Under any task order, the contractor shall only acquire and utilize National Information Assurance Partnership (NIAP) evaluated or validated Government-off-the-Shelf (GOTS) or Commercial-off-the-Shelf (COTS) IA and IA-enabled IT products for all IT systems.[4]

4.11.3 Information Assurance Definition

Information Assurance (IA) includes tasks which the contractor shall protect and defend information and information systems by ensuring their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.

4.11.4 Information Assurance Training and Certification

In accordance with clause 252.239-7001, contractor personnel performing IA functions shall meet all information assurance (IA) training, certification, and tracking requirements prior to accessing DoD information systems. Personnel tracking information, which includes subcontractor personnel, shall be included in the monthly contract status report (CDRL A023).

4.12 Task Order (TO) Closeout

A Task Order Completion Report (TOCR) shall be submitted for each Task Order as part of closeout. The contractor shall submit a completion invoice as follows:

[4] This is to comply with DoDI 8500.2, Information Assurance (IA) Implementation, 2 Jun 2003.

a. If the final cost/price of the task order does not change, a completion invoice shall be submitted within sixty (60) calendar days after the Government's acceptance of the TOCR.
b. If the final cost/price of the task order changes, the contractor shall submit a completion invoice within sixty (60) calendar days after the award of the modification resulting from the Task Order Completion Report (TOCR).

4.12.1 Task Order (TO) Completion Report (TOCR)

A completed TOCR (CDRL A007) shall be posted on the SPAWAR/PEO Integrated Data Environment & Repository (SPIDER) web site for each task order within ninety (90) calendar days of the latter of the following two milestones: the end of the task order's period of performance, or after the final modification to fund all outstanding CORNs. The Contracting Officer and COR shall be notified via e-mail on the same day that the report is posted. All report data shall be submitted using the standard Microsoft Excel spreadsheet template for the report provided on the SPAWAR/PEO Integrated Data Environment & Repository (SPIDER) web site (hereafter referred to as the "posted template"). The report shall include:

a. A completely filled out "Cover" worksheet from the posted template containing a digital signature certifying that the contents of the entire spreadsheet are complete and accurate. The digital signature shall use a United States Government issued certificate unless another digital ID is approved in writing by the Contracting Officer. The signature shall be that of an employee who has been legally authorized to represent the contractor.
b. A completely filled out "Costs by TID & WBS 4.1.4.4" worksheet from the posted template providing information for every task or subtask identified by the Task ID (TID) number on the Task Order. The posted template has blocks of cells for eight different TIDs. If a Task Order has more than eight TIDs, the contractor shall add blocks of cells to the template as needed to enable the provision of the same information for every TID on the Task Order.
c. A completely filled out "Deliverable Status 4.12.1.c" worksheet listing of all CDRL items ordered and status of all other deliverables. "Deliverables" are defined in Section 4.12.1.2.
d. A completely filled out "Warranties 4.12.1.d" worksheet for each warranty provided. Each item provided with a warranty shall appear on the "Deliverable Status 4.12.1.2" worksheet with a Deliverable Item number that appears there and on the "Warranties 4.12.1.d" worksheet for the item.
e. A completely filled out "Final Inventory List" for each Task Identification Number (TID) covered by the Task Order that has government furnish property that has not been consumed or installed during the installation. See Section 4.12.1.3 for detailed requirements for this list.
f. If the final cost deviates (overrun or under run) from the target cost by more than five percent (5%), a "Cost Analysis Report" shall be included within the TOCR. See Section 4.12.1.4 for detailed requirements for this report.

4.12.1.1 Financial Data

The Task Order Completion Report shall include a statement on the cover sheet identifying the amount of funds received, any remaining funds, and balances available, if any, for return (de-obligation).

4.12.1.2 Deliverables

The term "deliverables" includes all CDRL items, all items with a warranty, and all active electronic equipment (e.g., Ethernet switches, routers, radio frequency transmitters, signal converters) purchased under the task order. The term "deliverables" also includes all government furnished equipment transferred to the contractor's custody for delivery to an installation site under a task order. Deliverables do not include government furnished items that were delivered to the site and installed by the contractor, but that were never transferred to the contractor's custody.

4.12.1.3 Government Property

All Contractor-Acquired Property and Government-Furnished Property provided on a TO shall be consumed, installed, or returned to the Government as "excess government property". When a task order results in excess government property, a final Task Order inventory list meeting the requirements of CDRL A006 shall be provided. This shall be done by completing, for each TID with excess material, the "Final Inventory List 4.12.1.e" worksheet of the Excel spreadsheet for the TOCR. The contractor shall incorporate information and receipts obtained from the initial disposition inventory list covered by CDRL A006. (See SOW Para. 4.7.) The contractor shall include on the inventory list the following minimum information for each excess government property item:

a. Item Number (from the master parts list or bill of materials on the installation drawing (SID or IDP as-built) associated with the TID)
b. Manufacturer or, if the Manufacturer is unknown, the Supplier of the item
c. Manufacturer's part number, if the manufacturer is known or the supplier's part number if the manufacturer is unknown
d. National Stock Number (NSN) for all items with a NSN
e. Description of the item from the installation drawing parts list or a better multiple-word item description
f. Quantity
g. Unit of measure associated with the quantity. In most cases, this will be "EA" for "each". See Note 1below.
h. Unit cost
i. Condition of each item (i.e., Condition A, F, etc.). See Note 2 below.
j. Disposition method (e.g. Returned to Program Office, Delivered to DRMO, etc.)
k. An associated attachment number that will enable the government to quickly locate the paperwork proving the item was returned or properly disposed of. See Note 3 below.

Notes:
1. The abbreviations given for the unit of measure shall be one of the two-letter abbreviations used by the Navy Supply System and found in the Shore Installation

Process Handbook (SIPH) Appendix Q1 (based on NAVSUP Publication 409, MILSTRIP MILSTRAP Desk Guide).
2. A complete list and definitions of supply condition codes may be found in Appendix 2.5 of DoD 4000.25-2-M, MILSTRAP Manual. See Appendix F of DoD 4140.27-M for a table for the "Application of Supply Condition Codes to Shelf-Life Items".
3. Paperwork validating official receipt by the Government is required for returned items. The government reserves the right to require the contractor to provide a scanned copy of this paperwork in an Adobe Acrobat (PDF) file format sequenced by attachment number in lieu of or in addition to the actual paperwork. In these cases, the file name shall be part of the attachment number.

4.12.1.4 Cost Analysis Report

A Cost Analysis Report shall be included inside the Task Order Completion Report for all TOs with a final total cost that overruns or underruns the target total cost by more than five percent (5%). The report shall include either a cost underrun explanation in accordance with Section 4.12.1.4.1 or an overrun explanation in accordance with Section 4.12.1.4.2. Report data shall be submitted using the "Cost Analysis 4.12.1.f" worksheet of the Excel spreadsheet for the TOCR.

4.12.1.4.1 *Cost Underrun Explanation*

When the final cost underruns the target cost, the report shall explain the innovations or other factors that account for the cost savings.

4.12.1.4.2 *Cost Overrun Explanation and Recommended Corrective Action*

When the final cost overruns the target cost, the report shall explain the circumstances leading to cost growth and recommended corrective or risk mitigation actions for future similar situations. This report does not alleviate the responsibility of the contractor to notify the PCO and COR upon discovery of any potential situation where the cost will exceed the target. At any time during task performance, contractor may request increase in target cost for unforeseen additional costs beyond their control. However, the new target cost cannot exceed the anticipated actual cost.

5.0 FACILITY REQUIREMENTS

Effective technical performance of this contract requires immediate response from the Contractor, and, therefore necessitates frequent communication with SPAWAR technical personnel. The contractor will be required to have permanent contractor furnished office, warehouse, and fabrication facilities within a 30-mile radius of at least one of the following:

a. Space and Naval Warfare Systems Center Atlantic (SSC LANT) facilities in Charleston
b. Space and Naval Warfare Systems Center Atlantic (SSC LANT) facilities in Norfolk
c. Space and Naval Warfare Systems Center Pacific (SSC PAC) facilities in San Diego

5.1 Permanent Facilities

In view of the requirements set forth above, the contractor shall establish at least one major facility. The facility shall be established no later than 60 days after contract award. In addition, the contractor facility shall:

a. Provide sufficient environmentally controlled spaces for personnel, documents, and equipment, as appropriate, to support the functions of this contract. Document and Material Storage areas shall be organized so that storage locations are clearly and logically labeled in a sequential manner that is consistent with the database used to track and report on the material used to support this contract. The areas shall be accessible to the Government during audits.
b. Have provisions for generation and secure storage of and timely access to classified (up to and including SECRET) documentation and material.
c. Be physically secure to prevent unauthorized access to classified material or Government equipment and material.
d. Provide telephone, e-mail, and high-speed Internet service for all design and management personnel. The contractor shall have broadband Internet connectivity and an industry standard email system for communication with the Government. The contractor shall be capable of Public Key Infrastructure (PKI) client side authentication to DOD private web servers. All key personnel on contract shall be accessible by email and cell phone through individual accounts during all working hours.
e. Be properly outfitted with necessary equipment/hardware/software (including Microsoft Office Professional, Microsoft Project, and AutoCAD) to accomplish routine office procedures, develop plans, produce printed (A, B, C, D, and F size) drawings, and reports.
f. Be capable of expanding to meet future program tasking if required.
g. Be outfitted for warehouse storage and staging of system equipment, installation materials including racks and cabinets, and programmatic assets.
h. Be outfitted for storage, issuance and control, and staging of tools and test equipment.
i. Provide environmentally controlled and well lighted workbench space designed for testing, inspection, repair, modification, assembly, and installation of electronic equipment.
j. Contain paint booths for painting and powder coating that meet Federal, state, and local environmental requirements.
k. Contain a fabrication shop with a drill press, sheet metal brakes, power cold saw and band saw, welding equipment, grinders, belt sanders, iron worker, and other appropriate machine tools.
l. Be capable of providing embossed metal cable tags, wire markers, photosensitive aluminum and laminated plastic engraved identification plates on a quick reaction basis.
m. Possess immediate access (physical or electronic) to all standards listed in this Statement of Work or addressed in Appendix AC of the SIPH. (The SIPH is Item 3.2.1.9 in Table 2.)

6.0 DELIVERABLES

6.1 CDRLs

The Contractor shall prepare the required documentation in accordance with the requirements on the task order and the requirements provided in the appropriate Contract Data Requirements List (CDRL). The CDRLs that apply to this Statement of Work are shown in Table 7.

6.2 Electronic Format

The contractor shall ensure all documentation and data deliverables (CDRLs), and other data and correspondence are provided in electronic file format in accordance with Table 8. Data shall be provided electronically by email or posting to the IMO Global Installation Contract web site or other web site identified in the task order; hard copies shall only be provided if specifically requested by the Government. All data shall be provided in an editable format compatible with SPAWAR corporate standard software configuration as specified in Table 8. The initial cost or future upgrades of the listed computer programs are not chargeable as a direct cost to the Government.

6.3 Response to Government Review Comments

Unless otherwise specified in the CDRL, the following applies. The Government will review documents submitted by the contractor for acceptance within fifteen working days. When requested, the contractor shall correct all errors or deficiencies pointed out as a result of Government review within 15 working days and shall resubmit the document for final review and acceptance. The Government has the option to correct the document without further contractor involvement. However, the Government will inform the contractor of any changes that will affect subsequent tasks.

6.4 Contractor Information System

The contractor shall have broadband Internet connectivity and an industry standard email system for communication with the Government. The contractor shall be capable of Public Key Infrastructure client side authentication to DOD private web servers. All key personnel on contract shall be accessible by email through individual accounts during all working hours. Key personnel (e.g., installation leads, installation designers, program managers) shall have full e-mail capability while on travel through secure (through a commercial VPN system) remote access services.

Table 7 – CDRLs

CDRL Number	Type Document	Corresponding Contract Reference
A002	Report, Task Order Progress and Status, Weekly	4.1.3
A003	Technical Reports, Miscellaneous	4.1.5, 4.1.6.e,.4.1.6.f, 4.2.1, 4.2.3, 4.2.5.c, 4.2.5.e, 4.2.5.f, 4.2.5.g, 4.4.4.3, 4.5
A004	Program/Project Management Reports	4.1.6.a, 4.1.6.b, 4.1.6.d, 4.1.6.f
A005	Drawings, Miscellaneous	4.2.4.c, 4.2.4.d, 4.2.4.f, 4.2.5.b, 4.2.5.d, 4.4.4.2, 4.4.5
A006	Material/Inventory Reports, Miscellaneous	4.4.4.1, 4.7, 4.12.1.3
A007	Task Order Completion Report	4.12, 4.12.1, 4.1.4.4
A008	CLIN Combination Efficiencies Data	4
A009	Installation Planning Documentation	4.2.4.a, 4.2.4.b, 4.2.5.a
A010	Report, Record of Meeting/Minutes	4.1.6.d, 4.1.1
A011	Miscellaneous Quality Assurance Documentation	4.2.4.g, 4.8.4.1.b, 4.8.4.1.c, 4.8.5, 4.8.6
A012	Test and Inspection Plan	4.2.6
A013	Test and Inspection Report	4.2.6
A014	Miscellaneous Safety Documentation	4.9, 4.9.1, 4.9.2.2, 4.9.2.3
A015	Earned Value Management (EVM) System Reports	4.1.4.1, 4.1.4.3, 4.1.4.4
A016	Software and Firmware Configuration Settings	4.4.4.4, 4.4.4.5
A017	Afloat Production Schedule	4.1.7.1
A018	Shore Production Schedule	4.1.7.2
A019	Quality Management System (QMS) Documentation	4.8.4.1
A020	Site/Platform Preparation Requirements	4.2.3.1, 4.2.4.e
A021	Security Clearance Information	7.1, 7.2
A022	Contractor's Manpower Report	4.1.8
A023	Monthly Contract Status Report	4.2.9, 4.3.1, 4.11.4
A024	Integrated Program Management Report	4.1.4
A025	Integrated Baseline Review Schedule	4.1.4
A026	Contract Work Breakdown Structure	4.1.4
A027	Contract Funds Status Report	4.1.4

Table 8 – Acceptable Electronic File Formats

	Deliverable	File format to be compatible with the Government NMCI/NGEN suite of applications (without the need for any additional software)	Allowable File Extensions
A	Correspondence, Reports, BESEPs, TSIPs, Risk Management Plans, SOVT documents (prior to completion)	Microsoft Word	doc, txt, or rtf
B	Spreadsheets/Graphs	Microsoft Excel	xls
C	In-Briefs, Out-briefs, and other Presentations	Microsoft PowerPoint	ppt
D	Plans of Action and Milestones (POA&Ms)/ Production Schedules	Microsoft Project	mpp
E	Databases	Microsoft Access	mdb
F	Drawings (Primary Copy)	AutoCAD	dwg
G	Drawings (Secondary Copy)	Adobe Acrobat Reader	pdf
H	Completed Forms/SOVT Documents, Scanned As-Builts,	Adobe Acrobat Reader	pdf
I	Photographs	Windows Picture and Fax Viewer	jpg
J	Audio and Video files	Windows Media Player or other format specified in the task order	asf, wma, wmv, wm
K	Test equipment electronic data files with test results	Any Microsoft Office Professional Product or Adobe Acrobat Reader	txt, doc, pdf, rtf, xls
L	Quality Assurance/ Inspection Checklists	Microsoft Excel	xls
M	Quality Assurance Procedures and Manuals	Microsoft Word or Adobe Acrobat Reader	doc, rtf, or pdf

7.0 PERSONNEL SECURITY REQUIREMENTS

Personnel shall possess the minimum clearance requirements contained in the contract Personnel Qualifications requirements. Additional personnel security clearance requirements or requirements for access to classified material will be specified in individual task orders. When a task or portion of a task requires access to classified (i.e., CONFIDENTIAL, SECRET, or TOP SECRET) data, information, and spaces, the contractor shall only assign personnel with appropriate security clearances to the task or portion of the task requiring access. TOP SECRET Sensitive Compartmented Information (TS/SCI) security clearance requirements are covered in Section 7.4 of this SOW. The Contractor shall conform to the provisions of DOD 5220.22M, SECNAVINST 5510.30, and the Privacy Act of 1974. The Contractor shall employ personnel that possess and can maintain appropriate security clearances at the appropriate

level(s). Classified information released to industry shall be safeguarded in accordance with DoDD 5220.22. Controlled Unclassified Information (CUI) shall be identified and safeguarded consistent with the requirements of *Presidential Memorandum, Designation and Sharing of Controlled Unclassified Information (CUI)*, May 7, 2008 and DoD 5200.1-R. This is required by DODI 5200.01. (Note: The designation CUI replaces the term "sensitive but unclassified" (SBU). See DoDI 5200.01, October 9, 2008.) Any security violation shall be reported immediately to the respective Government Project Manager.

Costs to meet these security requirements are not directly chargeable to task orders.

Table 9 – Security References

(DoD issuances are available from http://www.dtic.mil/whs/directives/)

Document Number	Title
DoD 5220.22-M	DoD Manual – National Industry Security Program Operating Manual (NISPOM)
DoDD 5220.22	DoD Directive – National Industrial Security Program
DoD 5200.1-R	Information Security Program
DoD 5200.2-R	DoD Regulation – Personnel Security Program
DoDD 8500.1	DoD Directive – Information Assurance
DoDI 8500.2	DoD Instruction – Information Assurance (IA) Implementation
SECNAVINST 5510.30	DoN Regulation – Personnel Security Program
DODI 5200.01	DoD Information Security Program and Protection of Sensitive Compartmented Information
Presidential Memorandum, May 7, 2008	Designation and Sharing of Controlled Unclassified Information (CUI) (See http://www.fas.org/sgp/bush/cui.html)

7.1 Submittal of Security Clearance Information for US Locations

The contractor shall submit a completed OPNAV Form 5521 (filled out in its entirety) (CDRL A021), to include providing full SSN (for JPAS verification) for each employee who will require access to installation sites or SPAWAR facilities in the U.S. Contractors visiting installation locations shall have a SPAWAR badge and CAC card before arriving at an installation site. For ship visits in the US, the contractor shall be responsible for submitting visit requests to the appropriate Regional Maintenance Center (RMC) 15 workdays prior to their planned arrival date at any U.S. afloat work sites. For shore site visits within the US, the contractor shall be responsible for forwarding the required visit request information to the appropriate site security office and to the local RSIM at least 15 work days prior to the scheduled arrival date.

7.2 Submittal of Security Clearance Information for Tasks Outside of the US

The contractor shall submit a completed OPNAV Form 5521 (filled out in its entirety) (CDRL A021), to include providing full SSN (for JPAS verification) for each employee who will require access to Department of Defense or Department or Homeland Security installation sites or SPAWAR facilities overseas. Contractor personnel visiting

installation locations shall have a SPAWAR badge and CAC card before arriving at an installation site. Shore site visit requests for installations outside of the US will be handled per the requirements in the individual task orders. Ships visit requests for installations outside of the US will also be handled per the requirements in the individual task orders. If foreign travel is required, all outgoing Country/Theater clearance message requests shall be submitted to the SSC Pacific Foreign Travel Team, (OTC Building 2, Room 1656), for action unless direction to utilize another SPAWAR Foreign Travel Team or Travel office is provided in the task order. A *Request for Foreign Travel* form shall be submitted for each traveler, in advance of the travel, to initiate the release of a clearance message at least 40 days in advance of departure. Each traveler to a foreign country must also submit a *Personal Protection Plan* and shall have had a Level 1 Antiterrorism/Force Protection briefing within one year of departure and a country specific briefing within 90 days of departure.

7.3 Classified Materials Handling

The contractor shall verify that classified equipment removed from afloat and shore platforms and all classified documents are marked or tagged and safeguarded at all times in accordance with the National Industrial Security Program Operating Manual (DOD 5220.22-M).

7.4 Requirements for TS/SCI Clearances

Within 90 days of contract award, the contractor will be tasked to request TS/SCI clearances for at least two skilled installers available for worldwide assignment or to identify at least two skilled installers who already possess a TS/SCI clearance and are available for worldwide assignment. These installers must be available to arrive at any US military facility within two weeks notice and must be able to stay at remote locations for up to four weeks at a time. Some of the individual task orders issued against this contract will require personnel having Top Secret (TS) clearances who have been the subject of a Single Scope Background Investigation (SSBI) and are eligible for access to Sensitive Compartmented Information (SCI). Prior to starting work on these tasks, contractor personnel shall have the required clearance granted by the Defense Industrial Security Clearance Office (DISCO) and shall comply with IT access authorization requirements. In addition, contractor personnel shall possess the appropriate IT level of access for the respective tasks and position assignment as required by DoDD 8500.1, *Information Assurance* and DoDI 8500.2, *Information Assurance (IA) Implementation*. Any future revision to the respective directive and instruction shall be applied to the TO level as required.

7.5 Control of Contractor Personnel

7.5.1 Site Security

The contractor shall comply with site security regulations. All persons engaged in work while on Government property shall be subject to inspection of their vehicles at any time by the Government, and shall report any known or suspected security violations to the Security Department at that location. Contractor Personnel located within government

spaces shall be subject to Identification and badge requirements are specified under local clause H-323 (Contractor Picture Badge) and H-355 (Contractor Identification).

7.5.2 Accessing IT Systems

As applicable, contractor personnel assigned to the contract shall be required to obtain a Common Access Card (CAC) with PKI for access to Department of Defense facilities and websites. In addition, a hardware solution to securely read the card via a personal computer, and approved software for reading the CAC (e.g.,. ActiveGold) is required. Security requirements are integral to the successful accomplishment of task orders under the contract. Prior to accessing any Navy IT system or resource (directly or indirectly), all contractor personnel shall be required to complete IA training and submit a signed System Authorization Access Request Navy (SAAR-N) form to the contract's specified Contracting Officer's Representative (COR). All such forms submitted via e-mail shall be encrypted prior to transmission to protect the personally identifiable information on the submittal.

7.5.3 IT Position Categories

In accordance to DoDD 8500.2, SECNAVINST 5510.30, and applicable to unclassified DoD information systems, a designator shall be assigned to certain individuals that indicates the level of IT access required to execute the responsibilities of the position based on the potential for an individual assigned to the position to adversely impact DoD missions or functions. As defined in DoD 5200.2-R and SECNAVINST 5510.30, the IT Position categories include:

- IT-I (Privileged)
- IT-II (Limited Privileged)
- IT-III (Non-Privileged)

Note: The term IT Position is synonymous with the older term Automated Data Processing (ADP) Position (as used in DoD 5200.2-R, Appendix 10).

Investigative requirements for each category vary, depending on the role and whether the individual is a U.S. civilian contractor or a foreign national. The Contractor PM shall assist the Government Project Manager or COR in determining the appropriate IT Position Category assignment for all contractor personnel. All required SSBI, SSBI Periodic Reinvestigation (SSBI-PR), and National Agency Check (NAC) adjudication shall be performed in accordance with DoDD 8500.2 and SECNAVINST 5510.30. IT Position Categories shall be determined based on the following criteria:

7.5.3.1 IT-I Level (Privileged)

Positions in which the incumbent is responsible for the planning, direction, and implementation of a computer security program; major responsibility for the direction, planning and design of a computer system, including the hardware and software; or, can access a system during the operation or maintenance in such a way, and with a relatively high risk for causing grave damage, or realize a significant personal gain. Personnel whose duties meet the criteria for IT-I Position designation require a favorably

adjudicated SSBI or SSBI-PR. The SSBI or SSBI-PR shall be updated a minimum of every 5 years.

7.5.3.2 IT-II Level (Limited Privileged)

Positions in which the incumbent is responsible for the-direction, planning, design, operation, or maintenance of a computer system, and whose work is technically reviewed by a higher authority at the IT-II Position level to insure the integrity of the system. Personnel whose duties meet the criteria for an IT-II Position require a favorably adjudicated NAC.

7.5.3.3 IT-III Level (Non-privileged)

All other positions involved in computer activities. Incumbent in this position has non-privileged access to one or more DoD information systems/applications or database to which they are authorized access. Personnel whose duties meet the criteria for an IT-III Position designation require a favorably adjudicated NAC.

8.0 OPERATIONAL SECURITY (OPSEC) REQUIREMENTS

The contractor shall protect Government designated critical information and critical information generated by the contractor in accordance with the OPSEC attachment to the DD Form 254. The contractor shall use the guidance provided in the OPSEC attachment to the DD Form 254 to determine if the contractor will generate or use critical information. The contractor shall ensure that procedures for protecting OPSEC information are documented and followed.

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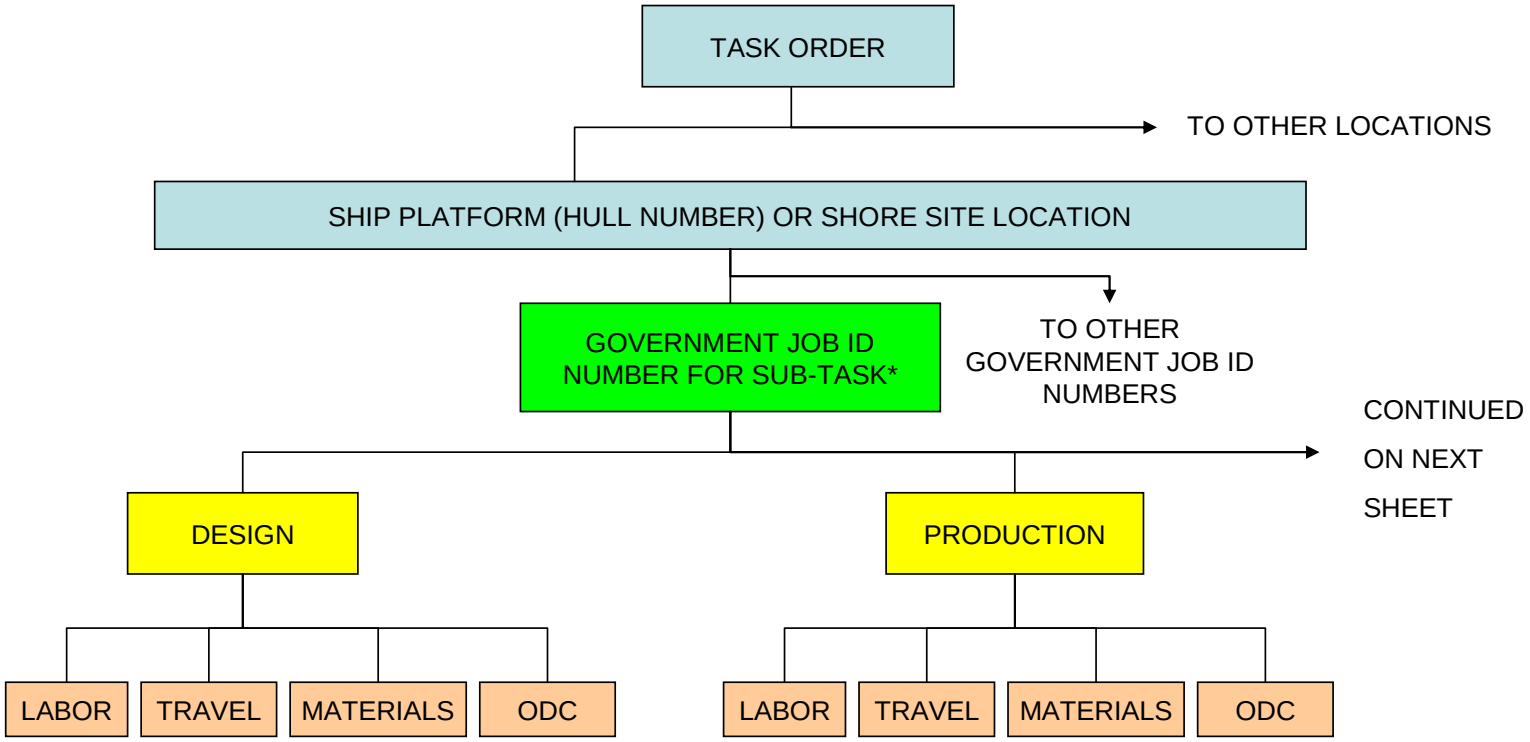
Attachment 1 to Contract Statement of Work

Work Breakdown Structure

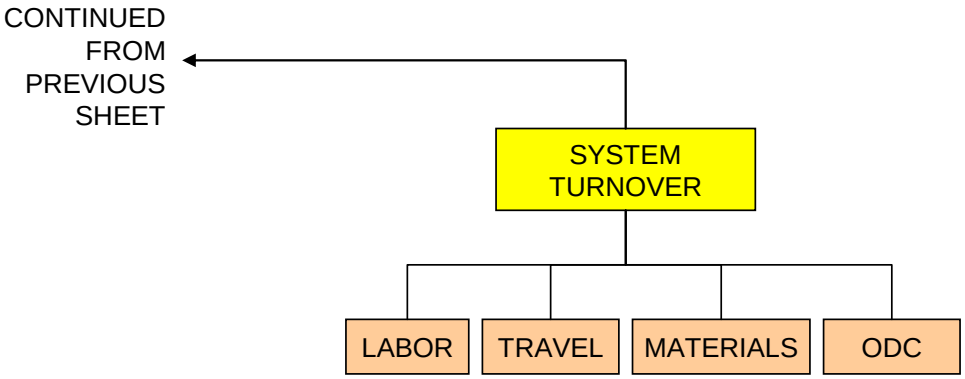
- **This attachment provides two separate WBS diagrams with associated work element descriptions.**
- **The first WBS diagram applies to installation tasks and will be used for tracking the progress of most tasks assigned under this SOW.**
- **The second WBS diagram applies to tasks that are not installation tasks. It applies to:**
  - **Technical assistance provided directly to ships, submarines or shore stations for CASREP resolution, fault analysis, testing, and/or repair of various installed systems and equipment as described in Section 4.5 of the SOW**
  - **Special Fabrication Tasks as described in Section 4.6 of the SOW**

INSTALLATION WBS BLOCK DIAGRAM
(SHEET 1 OF 2)

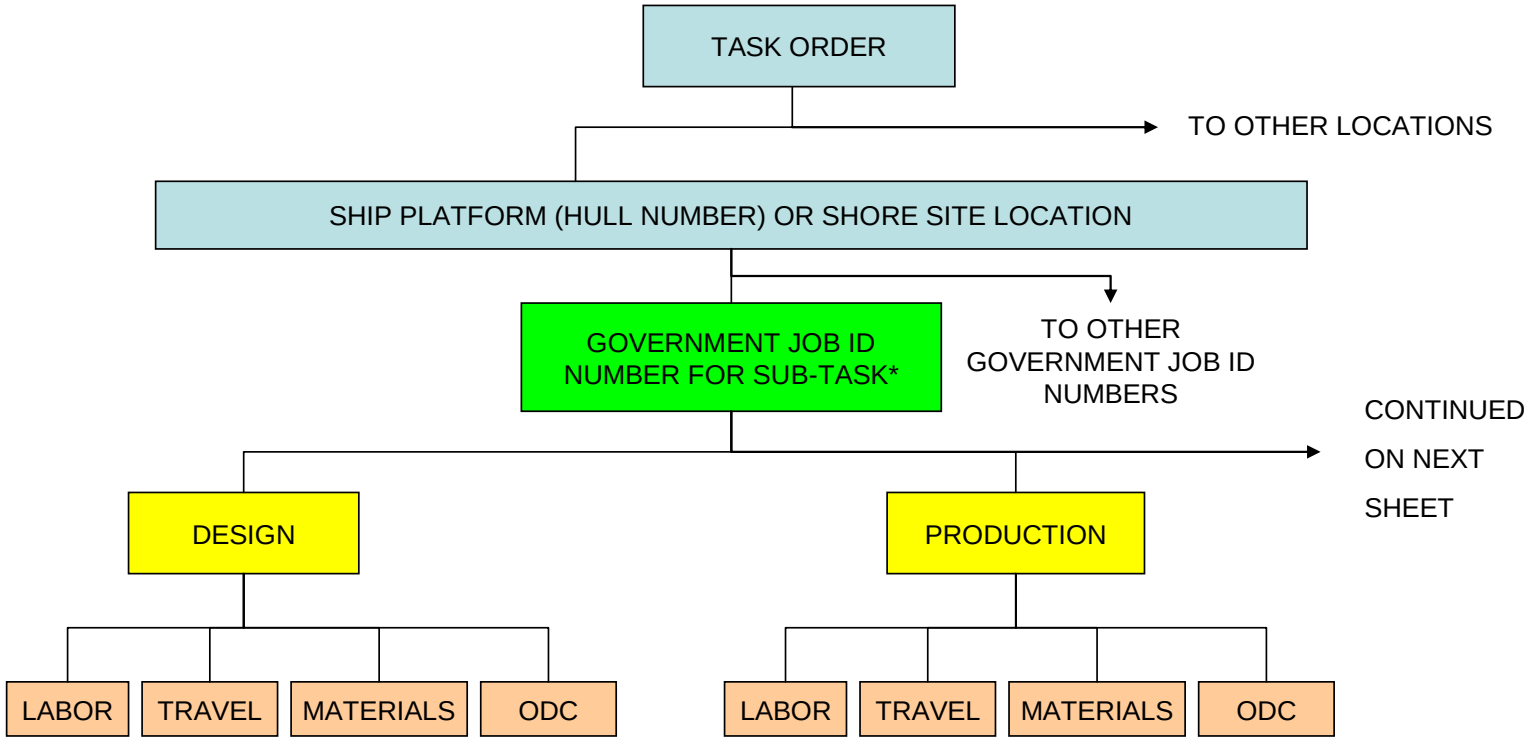


*USE SINGLE GOVERNMENT JOB ID FOR ENTIRE TASK ORDER IF THE TASK ORDER IS NOT DIVIDED INTO SUB-TASKS.

INSTALLATION WBS BLOCK DIAGRAM
(SHEET 2 OF 2)



INSTALLATION WBS BLOCK DIAGRAM
(SHEET 1 OF 2)



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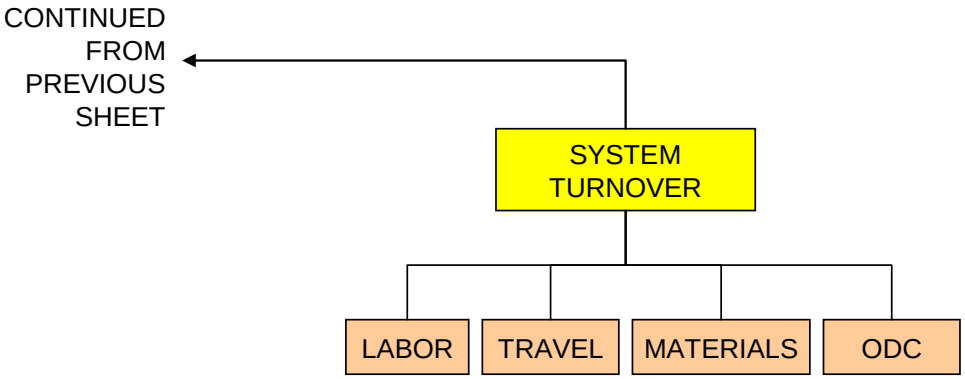
INSTALLATION WBS BLOCK DIAGRAM
(SHEET 2 OF 2)



LABOR & TRAVEL WBS SUB-ELEMENTS COMMON TO DESIGN, PRODUCTION, AND TURNOVER

- Common Work Breakdown Structure (WBS) Sub-Elements are applied during all phases of an installation (Design, Production, and Turn-Over) and are listed here to avoid repetition
- The “Common Labor WBS Sub-Elements” category covers:
  - Project Planning
  - Financial Support
  - Earned Value Management
  - Administrative Support (Includes clearance request preparation and travel arrangement assistance)
  - Material Management
    - Ordering
    - Receiving
    - Storing
    - Staging
    - Shipping (after initial receipt – Shipping and Handling Charges associated with the initial procurement of material are categorized as Material Costs, not Labor Costs)
    - Excess Material Disposition (Usually P/O System Turnover)
  - Developing/Updating the POA&M
  - AIT Planning Meeting preparation and attendance
  - Reports preparation and distribution
  - Drawing and other Documentation Reviews
  - In-Transit Labor
- The “Common Travel WBS Sub-Elements” category covers:
  - Per Diem
  - Transportation (Air Fare, Car Rental, Train Tickets, etc.)
  - Miscellaneous expenses (Baggage Fees, Parking Fees, Private Vehicle Mileage, etc.)
  - DOES NOT INCLUDE IN-TRANSIT LABOR (See previous “Common Labor WBS Sub-Element” description.)

DESIGN WBS ELEMENTS

- Design WBS elements cover work required to complete design, testing, and coordination documentation needed prior to starting production phase installation work
- The Labor WBS element covers:
  - Common Labor WBS Sub-Element support (See the previous sheet of this attachment.)
  - Preparing for and conducting Shipchecks and Site Surveys
  - SHIPALT, TRID, Engineering Change (EC), Field Change (FC), Temporary Engineering Change (TEC), Type Zero (TZ) Improvement, and Ohio Class Modification (OCMOD) document development. These documents will not normally be developed under this contract.
  - Installation Design Plan (IDP) development for shore installations
  - Ship Installation Drawing (SID) development for afloat platform installations
  - Installation documentation reviews
  - Installation Planning and Coordination document development (includes TSIPs, BESEPs, MOAs, and RTS messages)
  - Statements of Work (SOW) and other tasking document preparation
  - Pre-Installation Check-Out (PICO) document development
  - On-the-Job-Training (OJT) documentation development
  - System Operation and Verification Test (SOVT) document development
  - Liaison Action Request (LAR) preparation and submittal
  - Conducting or Obtaining Electromagnetic Interference (EMI) Studies and Preparing or Obtaining Reports
  - Conducting or Obtaining Electromagnetic Environmental Effects (E3) Studies and and Preparing or Obtaining Reports
  - Site Approval Documentation Preparation and Submittal
- The Material WBS element covers:
  - Miscellaneous purchases needed to support the Design Effort (Only minor material purchases are made during the design effort.)
- The Travel WBS element covers the previously discussed “Common Travel WBS Sub-Elements”
- Other Direct Charges (ODC) Element Covers:
  - Miscellaneous Items (very seldom used for the design phase)

PRODUCTION WBS ELEMENTS

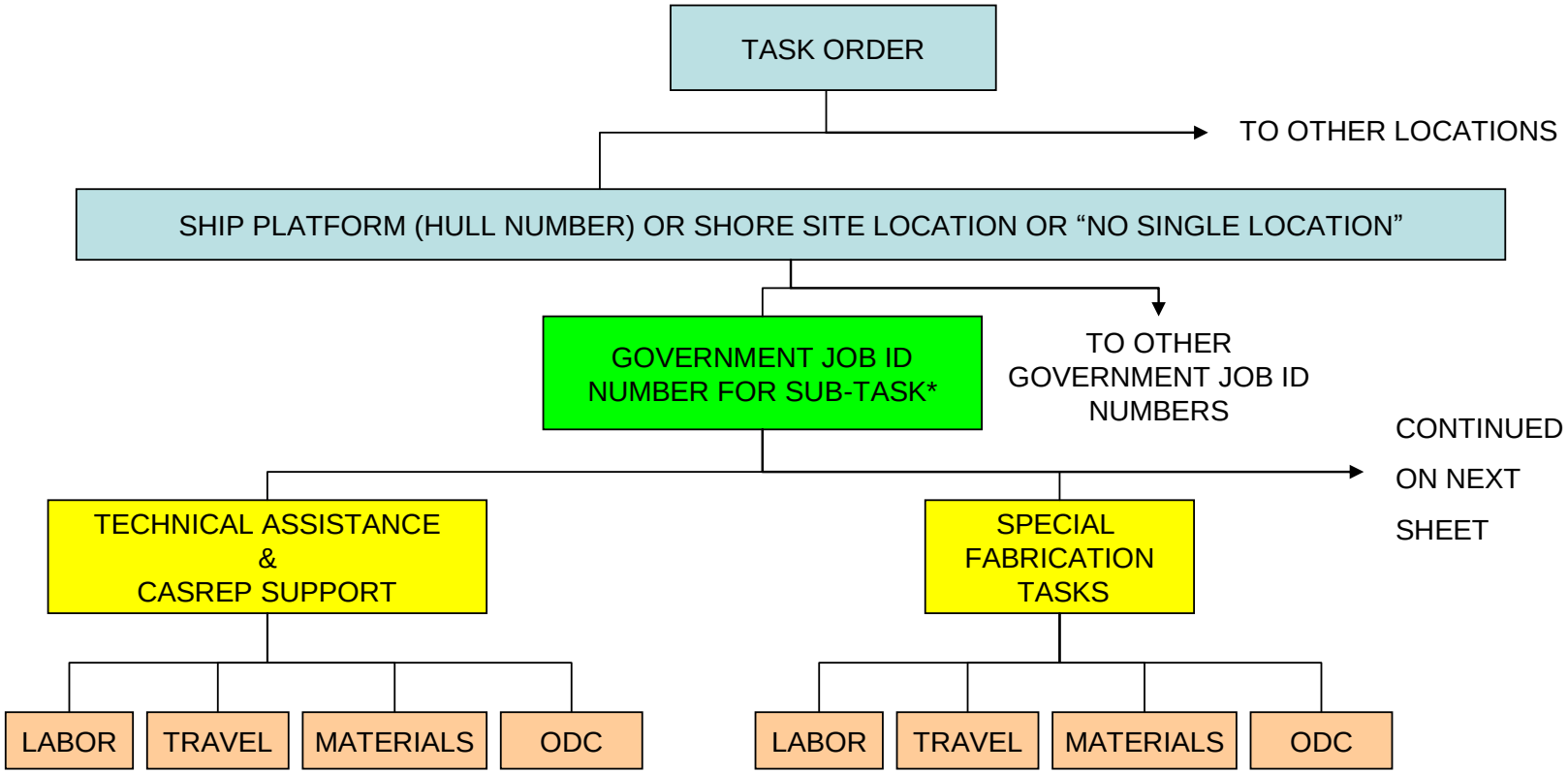
- Production WBS elements cover the work required to execute physical installations IAW their designs

- The Labor element covers:
  - Common Labor WBS Sub-Elements (previously listed)
  - Fabrication and assembly of parts
  - Pre-Production documentation (e.g., In-Briefs, Regional Maintenance & Modernization Coordination Office (RMMCO) Check-in Sheet completion, etc.)
  - In-Brief Presentation, Site Set-Up, RMMCO Check-In
  - PICO execution
  - Hardware and equipment removal
  - Duct and conduit installation
  - Cable pulling and dressing
  - Electrical wiring
  - Connector attachment and cable ring-down
  - Cabinet and equipment mounting
  - Software Installation (Includes configuration set-up and configuration recording)
  - Labeling
  - Installation Quality Assurance
  - Support Services (welding, rigging, painting, etc.)
  - Any other labor required to execute the physical installation in accordance with the design
- The Material element covers:
  - Installation and fabrication hardware (e.g., cable, wire, connectors, cabinets, duct, conduit, stuffing tubes, cable ties, cabinet foundations, bolts, screws, anchors, etc.)
  - Software (Software will normally be provided to, not purchased by, the contractor.)
  - Equipment (e.g., routers, switches, radio receivers and transmitters, sensors, antennas, etc.)
  - Consumable Items (e.g., cleaning materials, masking tape, cable lubricant, etc.)
- The Travel WBS element covers the previously discussed “Common Travel WBS Sub-Elements”
- Other Direct Charges (ODC) WBS element Covers:
  - Equipment Rentals
  - Trailer Rentals
  - Miscellaneous other direct charges

SYSTEM TURNOVER WBS ELEMENTS

- System Turnover WBS elements cover the work required after a physical installation has been completed (e.g., equipment mounted and cabled in, software loaded, etc.)
- Labor
  - Common Labor WBS Sub-Elements (Previously Listed)
  - SOVT Execution
  - ILS Inventory/CDMD-OA data correction
  - Out-Brief preparation and presentation
  - Training (including underway training)
  - Post-Installation document completion (Includes Installation Completion Reports and Messages)
  - As-Built Drawing Preparation
  - RMMCO Check-Out
- Material
  - Miscellaneous Purchases (Not Normally required)
- The Travel WBS element covers the previously discussed “Common Travel WBS Sub-Elements”
- Other Direct Charges
  - Test Equipment Rental
  - Miscellaneous (If Any)

NON-INSTALLATION SUPPORT WBS BLOCK DIAGRAM (SHEET 1 OF 2)



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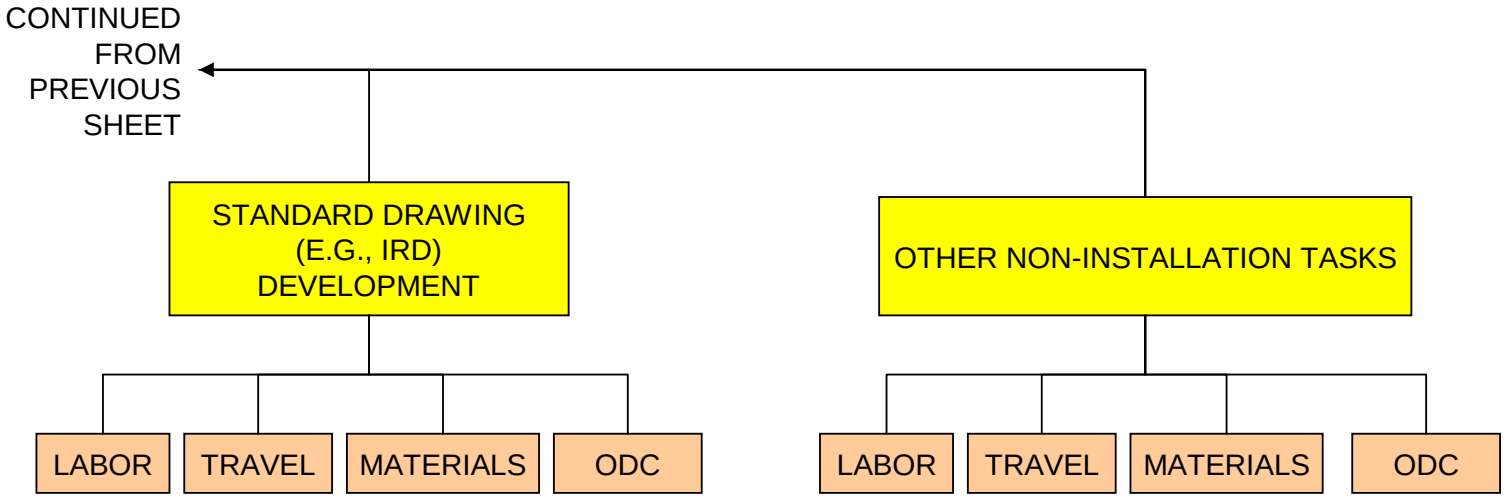
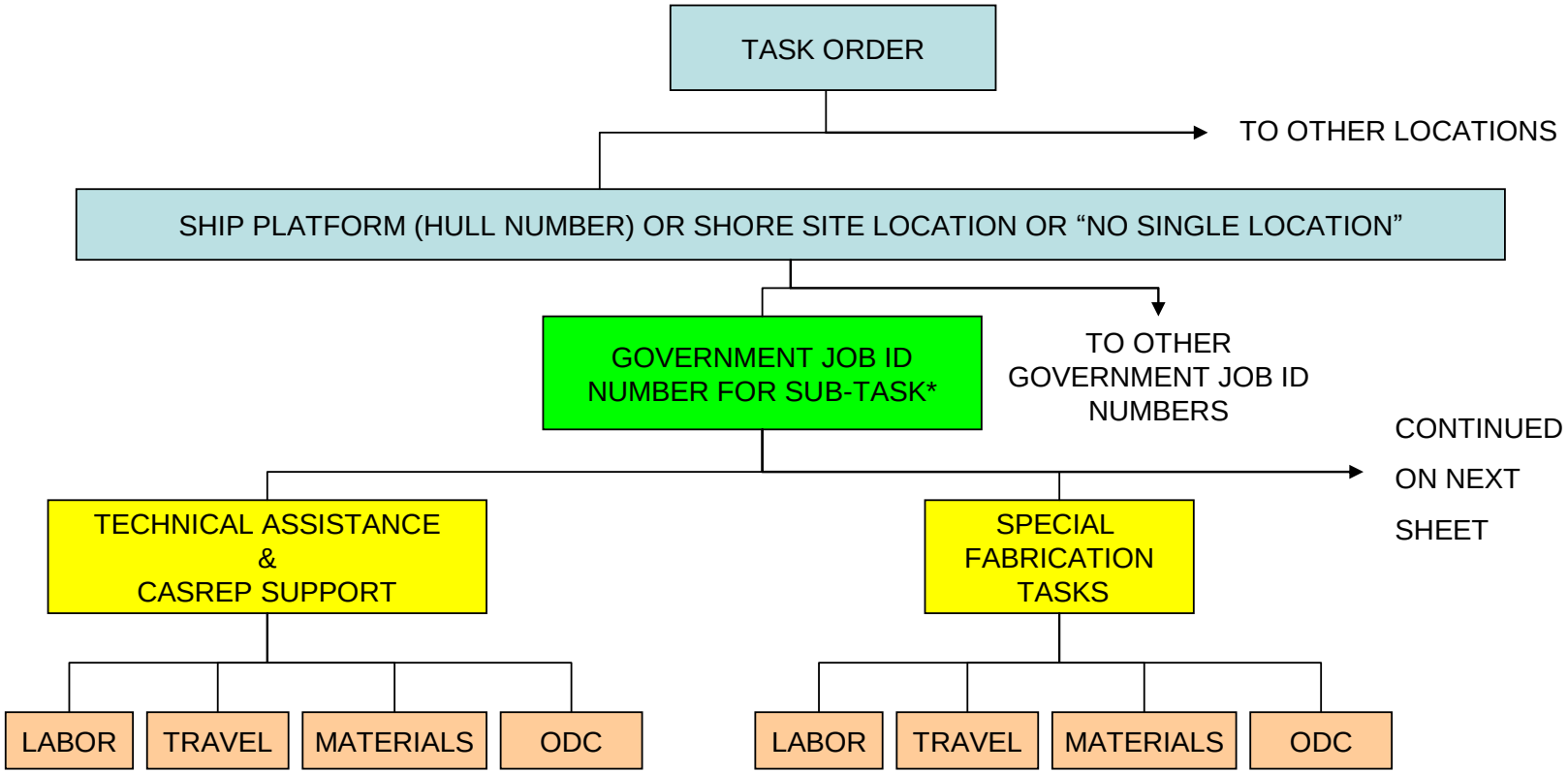
NON-INSTALLATION SUPPORT WBS BLOCK DIAGRAM (SHEET 2 OF 2)

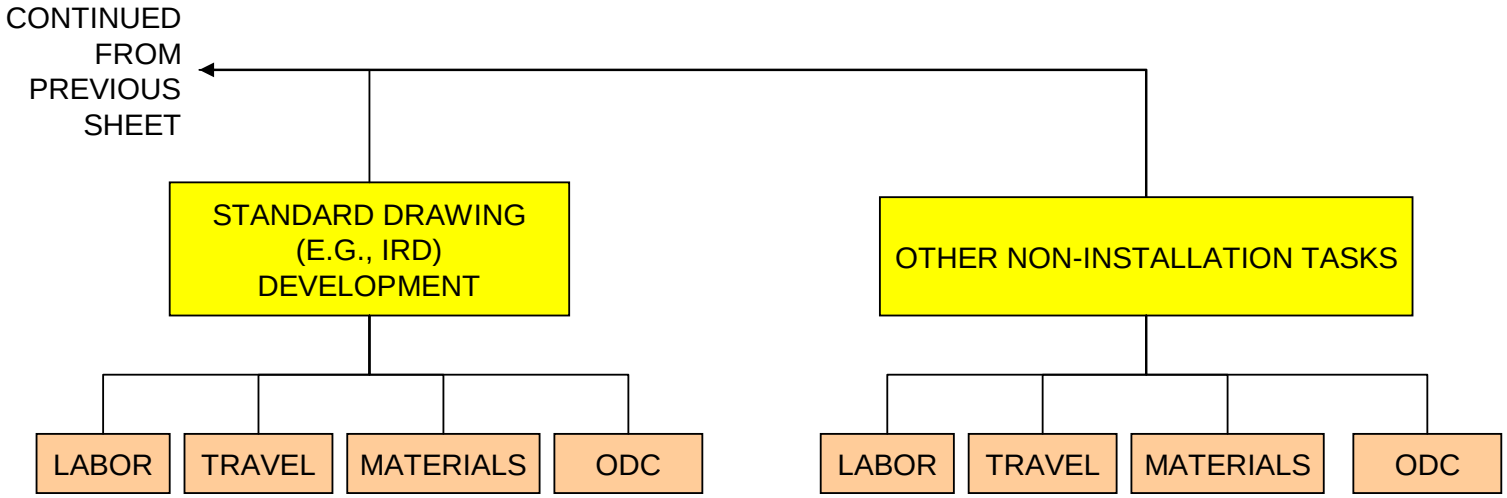


NON-INSTALLATION SUPPORT WBS BLOCK DIAGRAM (SHEET 1 OF 2)



*USE SINGLE GOVERNMENT JOB ID FOR ENTIRE TASK ORDER IF THE TASK ORDER IS NOT DIVIDED INTO SUB-TASKS.

NON-INSTALLATION SUPPORT WBS BLOCK DIAGRAM (SHEET 2 OF 2)



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Attachment 2 to Contract Statement of Work

List of Representative C4ISR Systems

This list is provided to show the broad range of C4ISR systems SPAWAR has supported. It is a representative list, not an all-inclusive one, and the Government makes no stipulation as its completeness. Most of the systems listed will not require operational, troubleshooting, or training support under the contract, and some systems that will require support are not listed. However, it is expected that all of the systems that will require support will be identical or similar in function to one or more of the listed systems.

System Name	Associated Nomenclatures	Remarks
Advanced Combat Direction System (ACDS)	AN/SYQ-20	Integrates various systems including sensors
Automated Digital Network System (ADNS)		Provides Wide Area Network (WAN) IP services
Advanced Narrowband Digital Voice Terminal Family	AN/USC-43, KY-99A, etc.	
AN/USQ-125 Link 11 Data Terminal Set	AN/USQ-125	Replaces USQ-63 and 74
AN/WSC-3 (V) UHF Satellite Communications Radio	AN/WSC-3 &OE-82 Antenna Systems	Also used with OE-158 antenna on submarines
AN/WSC-6(V) SHF Satellite Communications Radio	AN/WSC-6(V)4, 5, 7, and 9	
Automated Surface Observing System (ASOS)		Records and transmits METOC information.
Battle Group Information Exchange System (BGIXS)		
Battle Group Passive Horizon Exchange System (BGPHES)	AN/ULQ-20	
ONE-NET Wide Area Network		Shore Overseas NMCI Equivalent
Piers Base Level Information Infrastructure (BLII)		
Command and Control Processor (C2P)	AN/UYK-43 plus AN/USQ-69	Ensures interoperability between Link 11 and Link 16.
Common Data Link Management System (CDLMS)	AN/UYQ-86 (V2-8)	Replaces C2P

System Name	Associated Nomenclatures	Remarks
Combined Enterprise Regional Information Exchange System (CENTRIXS)		Provides communications for combined operations
Cooperative Outboard Logistics Upgrade (COBLU)	SSQ-108 + antennas	
Coalition Data Server (CODS)		Uses Sun Ultra 10
Common PC Operating System Environment (COMPOSE)		Secure Windows Environment
Commercial Wideband SATCOM Program	Utilizes AN/WSC-8(V)	
Demand Assigned Multiple Access (DAMA)		
Digital Modular Radio (DMR)		100 KHZ to 2 GHz configurable
Digital Wideband Transmission System (DWTS)	AN/SRC-57	1350-1850 Mhz
EHF SATCOM System		Ship and Shore Terminals
Electronic Key Management System (EKMS)		
Element Management System (EMS)	AN/SSQ-33C	
Enhance Position Locating and Reporting System (EPLRS)	RT-1720	UHF Networking Radio System
Encryption Systems	KG-175 TACLANE, KIV-7M, etc.	
Environmental Satellite Receiver Processors (ESRP)	AN/SMQ-11 (ship) and AN/FMQ-17	Weather Imagery
Global Command and Control System (GCCS)		Provides Global Status of Forces – Has multiple variants
GPS Timing and Synchronization Systems and Positioning Systems		
Inertial Navigation Systems	AN/WRN-7 series	Requires precision optical alignment
International Maritime Satellite (INMARSAT) Terminals	AN/FCC-100 (V) 9 for INMARSAT B HSD	
Integrated Shipboard Network System (ISNS)		Connects NIPRNET and SIPRNET to ships
Joint Service Imager Processing System-Navy (JSIPS-N)		
Joint Tactical Information Distribution System	AN/URC-107(V)7	Communications component of Link 16

System Name	Associated Nomenclatures	Remarks
Joint Worldwide Intelligence Communications System (JWICS)		SCI VTC
Link-11	AN/USQ-125	
Maritime Cellular Information Exchange System		Provides cellular coverage to BG/ARG ships
Meteorological Data Receiver-Recorder Set	AN/SMQ-11	Environmental Satellite Receiving
Meteorological Mobile Facility (Replacement)	AN/TMQ-44A(V)	
Multi-Functional Information Distribution System (MIDS/MOS)		
Mini-DAMA		
NALCOMIS IMA and OMA		Serves Navy and Marine Aviation Squadrons
Naval Integrated Tactical Environmental System (NITES)	AN/UMK-4(V)	METOC Functionality
Single Messaging Solution (NAVMACS II/SMS)		Messaging utilizing IT-21
Navigation Sensor System Interface (NAVSSI)		
Extremely High Frequency Satellite Communications (EHF SATCOM) System		
Network Operations Center		Includes Exchange e-mail services, firewall, etc. for IT-21
Radiant Mercury		
Ship/Shore Automated Communications & Control System (SACCS)	SSQ-33	
Shipboard Meteorological and Oceanographic Observing System Replacement (SMOOS-R)		
Shipboard Single Channel Ground and Airborne Radio (SINCGARS)		Navy VHF radios
Submarine Low Frequency/Very Low Frequency VMEbus Receiver		
Shipboard Non-Tactical Automated Data Processing (SNAP) System		SNAP III is related to Naval Tactical Command Support System (NCTSS)

System Name	Associated Nomenclatures	Remarks
Ship Remote Control System (SRCS)		
Ship Signal Exploitation Equipment (SSEE)		
Secure Terminal Equipment (STE)		Successor to STU-III
STONEGHOST		SCI web-based services
Submarine High Data Rate Antenna (SUB HDR)		
Shipboard Video Distribution System (SVDS)		Hub for C4I video feeds including GCCS-M, VIXS, etc.
Supplemental Weather Radar (SWR)		
Tactical Data Information Exchange Subsystem (TADIX)		
Tactical Switching System		Backbone for Navy Tactical (IT-21) Networks
Television Direct to Sailors (TV-DTS)		
Video Information Exchange System (VIXS)		VTC and encryption hardware

Attachment 3 to Contract Statement of Work

EVM Contract Work Breakdown Structure

-The contractor shall break down work below level 3 shown below as necessary to track performance

1 Job (by Job ID)
- 1.1 Pre-Fab
- 1.2 Prep
  - 1.2.1 Open WAFs
- 1.3 Ripout
  - 1.3.1 Equipment Removal
  - 1.3.2 Cable Removal
  - 1.3.3 HVAC Removal
  - 1.3.4 Piping Removal
- 1.4 Installation
  - 1.4.1 Power Mods
  - 1.4.2 HVAC Mods
  - 1.4.3 Piping Mods
  - 1.4.4 Foundations and Racks
  - 1.4.5 Software Preload
  - 1.4.6 Cable
  - 1.4.7 Switches
  - 1.4.8 Data Termination
  - 1.4.9 PCs
  - 1.4.10 Load PCs
  - 1.4.11 NIPRnet Software
  - 1.4.12 Software EAs
  - 1.4.13 SIPRnet Software
- 1.5 SOVT
- 1.6 SOVT Support

WBS Dictionary

Level	WBS Code	Element Name	Definition
1	1	Job (by Job ID)	System and work description provided in Job ID.
2	1.1	Pre-Fab	Building and ruggedizing rack mounts and attaching ancillary equipment.
2	1.2	Prep	Preparatory work on ship before starting production.
3	1.2.1	Open WAFs	Submit Work Authorization Forms (WAFs) to Ships' Force prior to starting any work.
2	1.3	Ripout	Removing equipment and interferences.
3	1.3.1	Equipment Removal	Removing all existing network equipment (servers, switches, racks, etc.). Total racks removed from ISNS installation compared to total racks to be removed during CANES installation is used as the scaling factor.
3	1.3.2	Cable Removal	Removing existing power wiring and data cables to all drop locations. Quantity of drops removed is dependent upon the existing network onboard. Quantity of drops installed during ISNS installation compared to quantity of drops removed during CANES installation is used as the scaling factor.
3	1.3.3	HVAC Removal	Removing existing HAVAC per ripout drawings
3	1.3.4	Piping Removal	Remove existing piping per ripout drawings
2	1.4	Installation	Installation of system and supporting systems
3	1.4.1	Power Mods	Modifying power distribution on board ships during installation (when required).
3	1.4.2	HVAC Mods	Modifying HVAC on board ships during installation (when required).
3	1.4.3	Piping Mods	Modifying piping on board ships during installation (when required).
3	1.4.4	Foundations and Racks	Installing foundations for racks to be mounted on and the installation of the racks to the foundations. Quantity of total racks installed during an ISNS installation compared to quantity of total racks to be installed during a CANES installation is used as the scaling factor.
	1.4.5	Software Preload	Preloading software on equipment
3	1.4.6	Cable	Installing power wiring and data cables to all drop locations. Quantity of drops installed is dependent upon the existing network

			onboard. Quantity of drops installed during an ISNS installation compared to quantity of drops to be installed during a CANES installation is used as the scaling factor.
3	1.4.7	Switches	Edge and backbone switches and connecting data cables to switches. Quantity of switch racks installed during an ISNS installation compared to quantity of switch racks to be installed during a CANES installation is used as the scaling factor.
	1.4.8	Data Termination	Adding connectors to ends of all data cables for installation into drop mounts and switches. Quantity of drops installed during an ISNS installation compared to quantity of drops to be installed during a CANES installation is used as the scaling factor.
3	1.4.9	PCs	Installing and mounting workstations. Quantity of workstations installed during an ISNS installation compared to quantity of workstations to be installed during a CANES installation is used as the scaling factor.
3	1.4.10	Load PCs	Configuring and loading software on to workstations. Quantity of workstations installed during an ISNS installation compared to quantity of workstations to be installed during a CANES installation is used as the scaling factor.
3	1.4.11	NIPRnet Software	NIPR software installation
3	1.4.12	Software EAs	Early adopter (GCCS-M, NTCSS, DCGS-N) software installations
3	1.4.13	SIPRnet Software	SIPR software installation
2	1.5	SOVT	Testing systems and software post-install to ensure full operational capability is met.
2	1.6	SOVT Support	Provide support to SOVT team during testing. Perform repairs and troubleshooting as required.